

NEBRASKA INFORMATION TECHNOLOGY COMMISSION

Tuesday June 18, 2002, 1:30 p.m.

Room 1507, State Capitol Building

Lincoln, Nebraska

Video Conference Site: Panhandle Station-High Plains Room, 4502 Avenue I, Scottsbluff, Nebraska

AGENDA

- 1:30 p.m. Call to Order, Notice of Meeting and Roll Call – Lt. Gov. Heineman
- 1:35 p.m. **Approval of April 30, 2002 Minutes*** – Lt. Gov. Heineman
- 1:40 p.m. Public Comment
- 1:45 p.m. NETCOM Pilot Project Update
- 2:00 p.m. Report from the Councils, Technical Panel and Staff
- A. Community Council
 - 1. Council Report
 - 2. Community Technology Fund Report
 - B. Education Council
 - 1. Council Report
 - 2. **Membership Changes***
 - C. State Government Council
 - 1. Council Report
 - 2. Government Technology Collaboration Fund Report
 - D. Technical Panel
 - 1. Panel Report
 - 2. **New member (CIO alternate)***
 - 3. **Standards & Guidelines:**
 - a. **Incident Reporting***
 - b. **Workstation Guidelines***
 - c. **Workstation Guidelines for K-12 Education***
 - E. Staff Reports
 - 1. Update on Information Technology Infrastructure Fund Projects
 - a. **Approve project plan for Division of Communications – Statewide Network Coordination***
 - 2. Review schedule for preparing reports to the Governor and Legislature:
 - a. Prioritized list of projects (Section 86-1506)
 - b. Biennial Progress Report (Section 86-1508)
 - c. Annual Report on Information Technology Infrastructure Act (Section 81-11,102)
 - 3. Update on agency information technology comprehensive plans
- 2:45 p.m. **Statewide Technology Plan Update***
- Section 1. Vision, Mission, Goals, and Objectives
 - Section 2. Council Priorities and Action Plans
 - Section 3. Technical Infrastructure
 - Section 4. Planning and Project Management
 - Section 5. Effectiveness Measures
- 3:15 p.m. Nebraska Network Workgroup Update
- 3:45 p.m. New Business
- 4:00 p.m. Adjournment

(Bolded * indicates action items.)

Meeting notice was posted to the NITC and Public Meeting Calendar Websites on June 11, 2002.

Agenda was posted to the NITC Website on June 12, 2002.

NEBRASKA INFORMATION TECHNOLOGY COMMISSION

Tuesday, April 30, 2002, 1:30 p.m.

State Capitol Room 1507, Lincoln, Nebraska

Videoconference Sites:

Panhandle Station, High Plains Room, 4502 Avenue I, Scottsbluff, Nebraska

Public Library, Information Center, 2nd Floor, 2020 1st Avenue, Kearney, Nebraska

PROPOSED MINUTES

MEMBERS PRESENT:

Lieutenant Governor Dave Heineman, Chair

Greg Adams, Mayor, City of York

L. Merrill Bryan, Senior Vice President & Chief Information Officer, Union Pacific

Dr. Doug Christensen, Commissioner, Department of Education

Dr. Eric Brown, Manager, KRVN Radio (via telephone conference)

Hod Kosman, CEO, Platte Valley Financial Services

Trev Peterson, Attorney, Knudsen, Berkheimer, Richardson, and Endacott, LLP

Dr. L. Dennis Smith, President, University of Nebraska

MEMBERS ABSENT: Gary Kuck, CEO, Centurion International

CALL TO ORDER, NOTICE OF MEETING AND ROLL CALL

The Chair, Lieutenant Governor Dave Heineman, called the meeting to order at 1:35 p.m. There were seven members present at the time of roll call. A quorum existed to conduct official business. The meeting notice was posted to the NITC and Public Meeting Calendar Web sites on April 23, 2002. The meeting agenda was posted to the NITC Website on April 24, 2002.

APPROVAL OF [FEBRUARY 2002 MINUTES](#)

Commissioner Bryan moved to approve the February minutes as presented. Commissioner Smith seconded the motion. Roll call vote: Adams-Yes, Brown-Yes, Bryan-Abstain, Heineman-Yes, Kosman-Yes, Peterson-Abstain, and Smith-Yes. Results: 5-Yes and 2-Abstain. The motion was carried by majority vote.

PUBLIC COMMENT

A presentation entitled "Broadband Internet Access in Rural Nebraska" by Roger Hahn, Nebraska Information Network, and Chuck Fast, Vice President of Consolidated Telephone Company, was provided. A survey was conducted to determine broadband access in Nebraska. Draft results were distributed. Not all the surveys have been returned. The data collected so far indicate the following result:

- Broadband access to the internet is available in 62% of the community telephone exchanges outside of the Omaha and Lincoln metropolitan areas
- Notes:
 - Preliminary survey – expect higher numbers
 - Currently working on percent of rural
 - Wireless may reach 60%
 - Over fifty rural exchanges have fiber to a high percentage of the rural customers – many 100%

Commissioner Christensen arrived at 1:40 p.m.

Mr. Fast displayed the service territory map for Consolidated Telephone Company that covers 8,508 square miles, primarily in the Sand Hills. He described the services provided and the technical aspects (barriers and accomplishments) of delivering those services. Currently, the company is providing Internet service to 1/3 of its customer base and has 90 DSL customers.

Mr. Hahn and Mr. Fast entertained questions and comments from the Commissioners regarding costs to customers, competitive services, marketing, and customer composition.

Commissioners requested more information on the costs to the customers for upfront and monthly charges. Mr. Fast agreed

to send a copy of the map and cost information to the Office of the CIO/NITC for the Commissioners. As more data are collected, Mr. Hahn offered to provide updates to the Commissioners as well.

COMMUNITY COUNCIL REPORT

Anne Byers, Community Information Technology Manager

Community Technology Fund. A total of 64 eligible applications were received for the [2002 Community Technology Fund](#). All applications were evaluated by three reviewers. The scores of the three reviews were averaged. At the April 11th Community Council meeting, the Council recommended funding as many of the top ranked projects as possible with available funding. As required by statute, the Technical Panel approved the grant reviews at their April 16 meeting. Mr. Schafer reported on recent budget cuts and explained that some of current grant activity will be shifted to the FY2003 grant funds.

Based on the \$200,000 originally anticipated to be available for funding, the 11 projects recommended by the Community Council to receive grant awards are listed below:

\$7,629.00 - City of Ashland, [Ashland Digital City Hall](#)
\$25,000.00 - Sarpy County, [Sarpy County GIS Base Map](#)
\$3,612.06 - LaVista Public Library, [Basic Scanning Classes](#)
\$11,136.00 - Cherry County Hospital, [Interactive Video/Distance Learning Network](#)
\$19,623.00 Valley County Hospital, [Interactive Video/Distance Learning Network](#)
\$25,000.00 Omaha Public Library, [Connect IT Omaha](#)
\$25,000.00 City of Aurora, [City of Aurora Utilities GIS](#)
\$18,518.00 Central Community College, [Sink or Swim-Educating the Rural Labor Pool](#)
\$20,000.00 University of Nebraska Extension, [Building Information Age Communities Planning Mini Grants](#)
\$22,292.00 Franklin County Memorial Hospital, [Electronic Archiving of Medical Records](#)
\$13,250.00 City of South Sioux City, [South Sioux City Wireless Municipal Area Network](#)
\$191,060.06 - GRANT AWARDS TOTAL

Commissioner Christensen moved to approve the Community Council's funding recommendations for the Community Technology Fund. Commissioner Smith seconded the motion. Roll call vote: Brown-Yes, Christensen-Yes, Kosman-Yes, Peterson-Yes, Adams-Yes, Bryan-Yes, Heineman-Yes, and Smith-Yes. Results: 8-Yes, 0-No. The motion was carried by unanimous vote.

Membership. The Community Council approved the recommendation of membership renewals for the following members.

- Gary Warren, Hamilton Communications and Aurora Information Technology Committee
- Max Thacker, University of Nebraska Medical Center, Omaha
- Donna Hammack, St. Elizabeth Foundation, Lincoln
- Chris Anderson, City of Ashland
- Ron Heezen, Omaha Public Library

Commissioner Adams moved to approve the membership renewals for Gary Warren, Max Thacker, Donna Hammack and Ron Heezen to serve on the Community Council. Commissioner Bryan seconded the motion. Roll call vote: Smith-Yes, Heineman-Yes, Bryan-Yes, Adams-Yes, Peterson-Yes, Kosman-Yes, Christensen-Yes, and Brown-Yes. Results: 8-Yes, 0-No. The motion was carried by unanimous vote.

[Building Information Age Communities Conference.](#) The conference was held on April 12, 2002 in Aurora, Nebraska. Approximately, 135 participants from 43 Nebraska communities were in attendance. On a scale of one to five with five being excellent, the overall conference received a rating of 4.4. A summary of the conference evaluation was included with the meeting materials.

[Technologies Across Nebraska Action Plan.](#) The Community Council has worked with Technologies Across Nebraska to develop an action plan. This action plan was approved by Technologies Across Nebraska partners at their March meeting. The action plan builds upon the recent conference and lays out a series of next steps. A copy of the action plan was included in the meeting materials.

EDUCATION COUNCIL REPORT

Tom Rolfes, Education Information Technology Manager

The Council has met twice since the last NITC meeting. The Council has been reviewing their priorities and action items for

the update of the Statewide Technology Plan. These will be finalized at the May 17th meeting. With the technical assistance of the Office of the CIO/NITC, the Training Advisory Work Group utilized electronic documents for their grant application and review process. The information, guidelines and forms were posted on the NITC Web site. The Web site received over 400 hits. Only 27 applications were submitted. The NITC will receive an update on funded projects at the June meeting. The Education Council discussed in length an interest and a need to increase the funding for training grants. The Task groups (Infrastructure, Diverse Training Opportunities, Life Cycle Funding, Needs of the Learner, Public/private Partnerships, and Leading Edge Technology Applications) have been meeting via a virtual chat site courtesy of the Nebraska Department of Education. The Council was involved in developing the K-12 Work Station Guidelines that were approved by the Technical Panel and are currently posted on the NITC Web site. The Council was also involved in the recommendation of a K12 representative to serve on the Technical Panel. Several of the Council's members are serving in leadership roles across the state in education technology efforts.

Membership. The Education Council forwarded the following recommendations for new members:

- George Mihel, President of Mid-Plains Community College Area, to replace Dr. Joe Preusser.
- Reverse the roles of NET Liaison representatives so that Bob Huber would become the official member with Mike Beach as the alternate.

Commissioner Smith moved to approve the Council's recommendations of George Mihel and Bob Huber (Mike Beach, alternate) as new members on the Education Council. Commissioner Christensen seconded the motion. Roll call vote: Peterson-Yes, Kosman-Yes, Heineman-Yes, Christensen-Yes, Bryan-Yes, Brown-Yes, Adams-Yes, and Smith-Yes. Results: 8-Yes, 0-No. The motion was carried by unanimous vote.

STATE GOVERNMENT COUNCIL REPORT

Steve Schafer, Chief Information Officer

The Council has held one meeting since the last NITC meeting in April. Priorities and action items were agenda items for discussion. Approval of the Government Technology Collaboration Fund grant guidelines is being delayed until budget and issues are resolved.

TECHNICAL PANEL REPORT

Walter Weir, Chair

The Technical Panel met in March and April. The tasks and accomplishments included the following:

- Approval of the project technical reviews for the Community Technology Fund.
- Development of standards and guidelines for information technology security incident reporting.
- Development of Minimum Work Station Guidelines for K-12. The Network Operations Group of the Educational Service Units assisted with the development of these standard. Kirt Langer, Network Specialist for ESU 18, attended the March Technical Panel meeting. The document is out for a 30-day comment review period.
- NIS (Nebraska Information System) project status update. The Technical Panel has several concerns regarding the following: project delays and penalties; consultant services after a year; change management; the completion of over 400 interfaces; date changes in accordance with university's time lines and how can these be addressed. The University of Nebraska is using SAP and will be upgrading at the end of May. Resources are becoming an issue. Lieutenant Governor Heineman agreed to set up a meeting with Mr. Conroy, University representatives and others.
- Section 3 Technical Infrastructure of the Statewide Technology Plan is being updated.

Charter Amendments. At the March meeting, the Technical Panel approved the recommendation to change the charter to include an additional member and alternate to represent the K-12 sector.

Commissioner Smith moved to approve the Technical Panel's charter amendments as presented. Commissioner Christensen seconded the motion. Roll call vote: Christensen-Yes, Brown-Yes, Smith-Yes, Kosman-Yes, Bryan-Yes, Adams-Yes, Peterson-Yes, and Heineman-Yes. Results: 8-Yes, 0-No. The motion was carried by unanimous vote.

Membership. At the April meeting, the Technical Panel approved the nomination recommendations of [Dr. Lance Perez](#), alternate for Christy Horn, and new member [Kirk Langer](#), Network Specialist for Educational Service Unit 18 as the K-12 representative and [Ron Cone](#), Systems Engineer for Educational Service Unit10, as his alternate.

Commissioner Bryan moved to approve the Technical Panel's recommendation of Dr. Lance Perez (alternate), Kirk Langer, and Ron Cone (alternate) as new members on the Technical Panel. Commissioner Christensen seconded the motion. Roll call vote: Heineman-Yes, Peterson-Yes, Adams-Yes, Bryan-Yes, Kosman-Yes, Smith-Yes, Brown-Yes, and Christensen-Yes. Results: 8-Yes, 0-No. The motion was carried by unanimous vote.

STAFF REPORT

Steve Schafer, Chief Information Officer

Information Technology Infrastructure Fund Report – NIS (Nebraska Information System) Project. The project is behind schedule for the Go-Live July 1st date. IBM has brought in two new individuals to provide project management. Re-planning is underway with new timelines. Additional staffing is needed both from the vendors and state employees. November 4th is the new planned Go-Live date. The Human Resources and Payroll phases will be ready by October 1st. Purchasing and inventory date is the same. The Budget Preparation Cycle will not be implemented until the next biennium. Negotiations are underway for a change order. The project is a fixed priced contract so the state should not be in financial jeopardy but it is probable that state resources may be affected. Conversions and interfaces are the biggest risks at this point.

Strengths of the project include an excellent project team, a committed project sponsor who is involved in day-to-day processes, and broad support from state agencies.

A question was raised as to what is occurring for "change management". Mr. Schafer informed the Commissioners that a Change Management Team is developing a plan. In addition, a newsletter is sent to all employees that provides information and updates on the project.

Information Technology Infrastructure Fund Report – CJIS. The project is exploring the process for "federal access" to expand system to include not only state offenders but federal offenses as well.

Information Technology Infrastructure Fund Report – Wireless. The project plan must be brought to the NITC prior to releasing additional money.

STATEWIDE TECHNOLOGY PLAN REVIEW

The Commissioners had no recommendations or input on of the [Draft Vision, Mission, Goals and Objectives](#). Final adoption and approval will occur at the June NITC meeting.

The Technical Panel and the Community, Education, and State Government Councils have been reviewing the Priorities and Action Plans. Staff are reviewing the other sections of the Statewide Technology Plan.

Discussions occurred regarding homeland security and federal funding. Nebraska is in a good position for University of Nebraska Medical Center to become a regional disease control center for the nation. A decision will not be made until late summer or early fall.

NETCOM PILOT PROJECT UPDATE

Brenda Decker, Director, Division of Communications

The Request for Information for the Scottsbluff Pilot Project was released on March 22nd with a deadline of April 15th. Two providers (Alltel and Sprint) responded. The requirements were refined, sent back to the vendors, and they are currently re-pricing. As the Pilot Project develops, the Division of Communications is discovering the following: 1) the concept of a backbone is still needed; 2) a short-term contract is needed; and 3) aggregation for the community will occur later in the project. The division anticipates that a proposal will be available by the June NITC meeting. The communities of Kearney, Holdrege, and North Platte are also interested in conducting a pilot project.

Ms. Decker entertained questions and comments from the Commissioners.

Commissioners emphasized the importance of developing solutions that promote affordable access for citizens.

For this fiscal year, several entities had contributed to funding a full-time position within the Division of Communications to assist with the NETCOM effort. The Division of Communications is preparing a proposal requesting \$75,000 from the Information Technology Infrastructure Fund to fund the position for FY03. This will be an action item for the June NITC meeting.

Commissioner Kosman left the meeting via videoconference at 3:25 p.m.

NEBRASKA NETWORK INTERIM REPORT

Steve Schafer, Chief Information Officer

While NETCOM deals with aggregation of raw bandwidth, Nebraska Network feasibility study deals largely with the next step - how to coordinate functions and processes of the application layers. After researching nine other states, the conclusions were that no two states function or process in the same way and that Nebraska needs to develop its own approach. For example, Nebraska is doing more interactive video than other states. The Work Group has begun discussions of models that would work in Nebraska. In July or August, the report will go out for a 30-day public comment period. The report will be ready as an action item for the NITC September meeting.

Commissioner Smith left the meeting at 3:30 p.m.

BUSINESS PORTAL DEMONSTRATION

Rod Armstrong, Nebraska On-line

Mr. Schafer provided a brief history of Governor's initiative on E-business and the State Government Council's efforts. Phases of the development of the Business Portal were all funded by grants from the State Records Board. A proposal for an Education portal was endorsed by the Education Council and will soon be submitted to the Records Board. The State Government Council is exploring the possibility of an employee portal.

Rod Armstrong proceeded with the demonstration of the Business Portal - a one-stop shop service for businesses. The web site address is <http://www.state.ne.us/business>.

Mr. Armstrong entertained questions and comments from the Commissioners.

NEW BUSINESS

There was no new business.

ADJOURNMENT

The next meeting of the NITC will be held in June with the date and location to be determined.

Commissioner Adams moved to adjourn the meeting. Commissioner Bryan seconded the motion. All were in favor. The motion was carried by voice vote.

The meeting was adjourned at 3:40 p.m.,

Meeting minutes were taken by Lori Lopez Urdiales and reviewed by staff of the Office of the CIO/NITC.

Community Technology Fund

2000 Grants

Project: ONE Library

Entity: Norfolk Public Library, Columbus Public Library, Northeast Nebraska Community College Library/Resource Center

Award: \$ 25,000

Norfolk Public Library, Columbus Public Library, and Northeast Community College Library/Resource Center formed a consortium (ONE Library) to jointly purchase and share a library automation system. ONE Library (<http://www.onelibraryne.org/>) allows access to the informational holdings (online databases, material collections, full-text journals, community resources, special papers, etc.) of the consortium members. Using the Internet, patrons can access the holdings of all member libraries. Patrons are enthusiastic about the new system. In addition to basic bibliographic information, patrons can view book jacket covers, book summaries, table of contents, and short author biographies.

The consortium saved thousands of dollars over the cost of purchasing separate systems. The cost of the software for three libraries sharing one license was almost one-third less than the cost of three libraries purchasing software separately. Columbus and Norfolk will each also save about \$7,000 per year in service maintenance.

Project: Public Internet Access Enhancement

Entity: City of Kearney

Award: \$19,380

Since 1994, the Technology Learning Center in the Kearney Public Library and Information Center has provided computer and Internet training as well as public access to computers. Eleven new computers were purchased for the Technology Learning Center. The Learning Center averages over 50 patrons per day, primarily for Internet access.

Project: Public Library System Web Catalog

Entity: Public Library System, Holdrege

Award: \$9,218

The Public Library System of Holdrege has published its catalog on the World Wide Web (<http://www.socentral.lib.ne.us>.) The Public Library System of Holdrege, Nebraska serves 14,533 citizens and includes the Holdrege Public Library, the Phelps County Library, the South Central Regional Library and the Holdrege Interlibrary Loan Center (HILL). The new Web site and catalog allow customers with Internet access to check on the availability of library materials nearly twenty-four hours a day and seven days a week. In the first six months of operation, the Web catalog averaged over 155 site hits and generated an average of over 40 hold requests per month.

Project: Connecting Nebraska E-Business Project

Entities: University of Nebraska Cooperative Extension and Center for Rural Community Revitalization, the AIM Institute, and the Rural Development Commission

Award: \$52,000

The Applied Information Management (AIM) Institute, University of Nebraska Cooperative Extension, and the University of Nebraska-Lincoln's Center for Applied Rural Innovation (CARI) cooperatively addressed the information technology needs of rural Nebraska businesses. The report *Nebraska Business Use of Information Technology* (available at <http://www.aimlink.org/pdf/nuseofit.pdf>) examined how rural Nebraska businesses are using information technology. The report found that Nebraska business owners and managers projected rapid growth in the use of information technology in their businesses. The report concluded:

“From an economic development perspective, it is absolutely critical that Nebraska businesses and entrepreneurs have the access and knowledge to use information technology to remain competitive and expand market opportunities.”

This project also provided training to community members and business people. The Nebraska Electronic Main Street e-commerce training program was offered at 26 sites. Twenty-seven sites hosted the Master Navigator Internet training program. An advanced e-commerce curriculum was also developed.

Project: Web Parent Teacher Project

Entity: Elmwood-Murdock Public Schools

Award: \$22,270.00

The Web Parent-Teacher Program created a volunteer position for each elementary classroom called a "Web parent", similar to the traditional "room parent", to assist the classroom teacher with creating a Web page for that classroom and updating the Web page throughout the school year. The program trained volunteer Web parents and classroom teachers on Web page development skills and Internet skills. A bi-monthly online newsletter publicized the work being done at the school and encouraged use of the Internet. Elementary schools students worked with high school students to sell popcorn online as a fundraiser.

2001 Grants

Final Reports are due June 17 and this document will be updated as the reports are received.

Project: Aurora Technology Center (formerly the Aurora Technology Business Incubator)

Entity: City of Aurora

Award: \$25,000

Status: Final report pending.

The City of Aurora has developed a technology business incubator. The renovated facility offers broadband Internet access, a technology training center, and conference room as well as office space. The Aurora Technology Center provides technology and office support, technical consultation, professional consultation, and education and networking experiences. The technology center currently has five clients and several prospective clients.

Project: Creating a Common Framework for Integrating Surface Water Data

Entity: Lower Platte North Natural Resources District

Award: \$24,800

Status: Reports pending.

The Lower Platte North Natural Resources District is facilitating inter-agency collaboration and multipurpose use of water data by developing a standardized database of surface water features.

Project: Taking Resources and Information Online (TRIO)

Entites: Bruun Memorial Public Library of Humboldt, the Humboldt Public School Library-Media Center, and the Table Rock-Steinauer School Library-Media Center

Award: \$18,600

Status: Final report pending.

The Bruun Memorial Public Library of Humboldt, the Humboldt Public School Library-Media Center, and the Table Rock-Steinauer School Library-Media Center formed a consortium to jointly purchase and share a library automation system. Project partners are pleased with the new system.

Project: Technology-Based Education for Health Occupations

Entity: Southeast Community College

Award: \$18,195

Status: Final report pending.

Southeast Community College has developed 13 radiologic technology courses and 7 surgical technology courses for online use to address the shortage of medical technicians in rural Nebraska. The overall student retention rate for the online program is 92% and the overall employment rate of program graduates in rural hospitals is 100%.

Project: Senior Connection

Entity: Beatrice Public Library

Award: \$22,932

Status: Final report pending.

The Beatrice Public Library has partnered with the Blue Rivers Area Agency on Aging to provide instruction to senior citizens on the use of the Internet. Peer volunteers have trained nearly 100 users at the Senior Center on using e-mail and other Internet applications. Several senior citizens had computers at home but needed help learning how to use them. Others have purchased new computers since receiving training. The Senior Center had a card party as a fundraiser for the ADSL service and raised enough money to pay for two years worth of service.

Project: Telehealth

Entity: Nebraska Commission for the Deaf and Hard of Hearing

Award: \$25,000

Status: A three-month extension has been granted.

The Nebraska Commission for the Deaf and Hard of Hearing will establish a videoconferencing network to provide mental health services for deaf and hard of hearing people in the Panhandle. Higher than expected telecommunications charges have been a barrier to the implementation of this project.

Project: Omaha Tribe Online Information Technology Plan

Entity: Omaha Tribe of Nebraska

Award: \$25,000

Status: Final report pending.

The Omaha Tribe of Nebraska and its consultant have developed an information technology plan, including a needs assessment and problem identification; recommendations regarding telecommunications resources; recommendations regarding hardware and software; an implementation timeline; IT budget; identification of funding resources; and a review of current federal and state legislation.

The plan includes four broad recommendations:

1. Establish a tribal management information systems department.
2. Require computer applications training for current staff.
3. Develop and maintain departmental enterprise specific databases.
4. Develop tribal member IT expertise for career development.

Project: Brainard Community Technology Center

Entity: Village of Brainard

Award: \$18,495

Status: Final report pending.

The Village of Brainard has developed a community technology center, offering a variety of technology classes on making address labels, genealogy, surfing the Internet, children's Web sites, mapping out trips, and using e-Bay. Volunteers are also using technology to preserve the heritage, history, and resources of the area. Over 250 family stories have been collected for the Qa125 history book. A Web site is also being developed for the community. The community is also using information technology to improve record keeping and to access information. The Village clerk is using e-mail to correspond with other village clerks. The Brainard Volunteer Fire Department has purchased a computer for record keeping.

Project: KCH Clinic Integrated Practice Management and Electronic Medical Record Project

Entity: Kimball County Hospital Clinic

Award: \$25,000

Status: Final report pending.

The Kimball County Hospital Clinic is implementing an electronic medical record system to improve patient care and increase efficiency. Even though the capability to scan patient records has only been available since mid-November, it is apparent that this will reduce personnel costs in the long-term and improve patient care.

Project: Greeley Learning and Technology Center

Entity: Village of Greeley

Award: \$23,500

Status: Final report pending.

In cooperation with Greeley Public Schools, the Village of Greeley has established a Learning and Technology Center in the school library to provide accessible, up-to-date resources, training and education to residents of Greeley County. Users range from pre-school to retired people.

Project: City of Lincoln Technology Infrastructure Audit

Entity: City of Lincoln

Award: \$23,500

Status: Complete

The City of Lincoln and its contracted evaluator completed a technology audit. The results were presented to the Mayor's Technology Council on April 10, 2002. The Technology Council is in the process of utilizing the results of the technology audit in combination with committee team reports to develop a coordinated community-wide technology infrastructure plan of action. The assessment is available at <http://www.ci.lincoln.ne.us/city/mayor/tech/pdf/techrprt.pdf>.

Three key findings resulted from the audit:

1. Essential elements are in place in Lincoln to make the community successful in the New Economy.
2. The need exists for a unified approach to develop and implement initiatives to make Lincoln competitive in the New Economy.
3. None of the benchmark communities have a clear competitive advantage over Lincoln.

Project: From Plowshares to PCs: Creating a Learning Community in South Central Nebraska

Entities: Central Community College--Holdrege Center and the University of Nebraska
Cooperative Extension--Phelps/Gosper Counties

Award: \$23,500

Status: Final report pending.

Central Community College--Holdrege Center and the University of Nebraska Cooperative Extension--Phelps/Gosper Counties surveyed businesses regarding their information technology training needs and have delivered information technology training in South Central Nebraska.

TO: NITC Commissioners

FROM: Alan Wibbels, Education Council Co-Chair
Jack Huck, Education Council Co-Chair
(Presented by Renee Bose, Education Council alternate for K-12)

DATE: June 18, 2002

RE: Education Council Report

1a) Education Council Update—

The Education Council has met only once on May 17 since the April 30 NITC Meeting.

At that meeting the Education Council recognized members and alternates that were departing the Council after two or more years of service. They are indicated at the bottom of the Education Council membership document.

The Education Council also revised the grammatical wording of their six priorities and officially recommended seven Action Items for inclusion in the Statewide Technology Plan; retaining or revising four action items from 2001-02 and adding three new ones.

The Education Council also formed a committee to take the lead in inventorying Nebraska K-12 and Higher Ed institutions' use of course/knowledge management tools such as Blackboard and WebCT. This report will be ready for the Education Council on July 19.

Over the last 30 days, numerous Education Council members were also in attendance at a number of state and national educational technology conferences.

1b) Telecommunications Training Grants Update

Tracie Klosterman, NET staff member

LB1217 Am 2629: " The NETC shall inform the Nebraska Information Technology Commission (NITC) and the Education Council of the NITC of its grant submission procedures and its tentative awards of grants in a timely fashion."

(See Attachment A.)

2) Education Council Membership

Under Education Council membership, the Council has forwarded the names of 7 members who will be renewing their 2-year terms. One member is retiring and one member is choosing not to continue. These additional appointments will be before you at your next meeting. Also, we like to recognize Doctors Joseph Preusser, Woody Ziegler, Rob Ziegler, and William Berndt for their many years of service.

[See Attachment B.]

ATTACHMENT A

TELECOMMUNICATIONS TRAINING GRANTS
Round 10 2002-2003

Tier I: Maximum of \$10,000

| SECTOR | NUMBER SUBMITTED | NUMBER APPROVED |
|-------------------|---------------------|--------------------|
| K-12 | 4 | 1 |
| ESU | 7 | 5 |
| Community College | 5 | 3 |
| State College | 1 | 1 |
| University | 2 | 0 |

TOTAL 19

Tier II: Maximum of \$25,000

| SECTOR | NUMBER SUBMITTED | NUMBER APPROVED |
|-------------------|---------------------|--------------------|
| K-12 | 5 | 0 |
| ESU | 2 | 1 |
| Community College | 0 | 0 |
| State College | 0 | 0 |
| University | 1 | 0 |

TOTAL 8

**Nebraska Information Technology Commission
EDUCATION COUNCIL**

Membership Renewals/Replacements Effective July 1, 2002

| Name | Representing | Status |
|------|--------------|--------|
|------|--------------|--------|

HIGHER EDUCATION

| | | |
|----------------------------|-------------------------------------|---|
| George Mihel | Community College System | Recommend Renewal |
| Thomas O'Neill, Jr. | Independent Colleges & Universities | Recommend Renewal |
| Harvey Perlman | UN System | Recommend Renewal |
| Sheila Stearns | State College System | Recommend Renewal |
| William Berndt | UN System | Retiring; Subsector seeking replacement |

K-12 EDUCATION

| | | |
|----------------------|---------------------------|--|
| Keith Bartels | Boards of Education | Recommend Renewal |
| Jeff Johnson | Public Teachers | Recommend Renewal |
| Alan Wibbels | Educational Service Units | Recommend Renewal |
| Rob Ziegler | Administrators | Term expires June 30, 2002; Subsector seeking replacement |

Recognition

Dr. Joseph Preusser, Member 2000-2002
 Dr. William Berndt, Member 1998-2002
 Dr. Woody Ziegler, Member 1998-2000; Alternate 2000-2002
 Dr. Rob Ziegler, Member 2000-2002

Government Technology Collaboration Fund

1998 Grants

Project: Data Storage of Geologic Logs From Water Well Registration

Agency: Department of Water Resources and Conservation and Survey Division, IANR,
University of Nebraska

Award: \$22,200 (Actual Expenditure: \$22,200)

The grant allowed the DWR and Conservation and Survey Division to work across agency boundaries to make water well registration information available to the public. Well registration information was converted from paper to an electronic format and posted on the DWR Web site. GTCF funding provided for the conversion of nearly 68% of the wells in the DWR registered water well database (65 counties).

Project: Feasibility Study for Paperless Decision Making Environment

Agency: Board of Parole

Award: \$13,000 (Actual Expenditure: \$10,010)

The Board of Parole utilized these grant funds to perform a feasibility study for an automated, paperless decision-making environment. A consultant performed the study, prepared an action plan, and completed a cost-benefit analysis.

Project: Networking and Web Site

Agency: Nebraska Wheat Board

Award: \$7,000 (Actual Expenditure: \$6,984.33)

This small agency purchased hardware and equipment for their office network and developed a Web site with these grant funds.

Project: Needs Assessment of the State's Emergency Response Organizations

Agency: State Fire Marshal

Award: \$25,000 (Actual Expenditure: \$11,656.28)

The GTCF grant funds allowed the State Fire Marshal to analyze the benefits and usage of computers by emergency organizations across the state and perform a needs assessment. The Fire Marshal utilized a survey which focused on computer use for supporting normal operations,

training, and emergency reporting of these organizations. A report was prepared based on the results of the survey and information was provided to the 686 emergency response organizations.

Project: Upgrade Existing Network and Development of a Statewide Postsecondary Educational Facilities Database

Agency: Coordinating Commission for Postsecondary Education

Award: \$60,145 (Actual Expenditure: \$57,741.72)

The CCPE used the grant funds to purchase hardware, communications equipment, and create a database of postsecondary educational facilities. The database has been populated and reports on these facilities can be generated. The database is available on the Web, and can also be updated on-line.

Project: State and Local Government Standards: Electronic Imaging, E-mail, and Web sites.

Agency: Secretary of State - Records Management Division

Award: \$48,850 (Actual Expenditure: \$44,683.97)

A consultant was hired to develop these retention standards for state and local government. A set of draft rules and regulations were prepared. Focus group meetings and public forums were held to obtain input on these documents.

Project: Transform Corn Production and Economic Information into a GIS Reporting System

Agency: Nebraska Corn Board

Award: \$4,018 (Actual Expenditure: \$4,018)

The Corn Board used grant funds to purchase hardware, software, and training on GIS software. The Board is using the GIS information to better analyze data on corn production, transportation, storage, pricing, uses, and marketing.

Project: Conversion from Macintosh to Windows PCs

Agency: Foster Care Review Board

Award: \$50,182 (Actual Expenditure: \$50,182)

The grant funds were used to partially complete the conversion of this agency from Macintosh-based computers to Windows-based computers. The agency sought to increase compatibility with other public and private entities, and be more cost-effective in terms of hardware/software purchases, upgrades, and repairs.

2000 Grants

Project: E-granting Conversion Project

Agency: Nebraska Arts Council

Award: \$41,000 (Actual Expenditure: \$16,000)

The Arts Council worked with IMServices to develop a Web-based grant program. The project converted a grant application process from paper to electronic -- allowing the grant application to be completed and submitted on-line. The Council will evaluate this grant application process to determine if additional grants should be moved to the Web.

Project: NCJIS Enhancements

Agency: Crime Commission

Award: \$62,000 (Actual Expenditure: \$62,000)

This grant had two components: implementation of Soundex on NCJIS (Nebraska Criminal Justice Information System) and expansion of local data availability through NCJIS. Soundex is a technology that compares similar names or spellings for matches (e.g. Smith and Smythe). The NCJIS server is a secure browser based Internet access point for criminal justice agencies to use central criminal justice databases. NCJIS is the result of a cooperative project involving state and local agencies to improve the access, availability and sharing of data. The grant funds were used to provide additional access to local law enforcement records systems. The Crime Commission used these grant funds to leverage additional federal funds for the project.

Project: Common Business Identification Number

Agency: Department of Revenue

Award: \$50,000 (Actual Expenditure: \$298.30)

The purpose of this project was to study the feasibility of merging the unemployment insurance file maintained by the Nebraska Department of Labor with the sales tax files maintained by the Nebraska Department of Revenue. A successful merger of these databases would allow the Department of Revenue to update its Nebraska Business Classification Codes, to the new North American Industrial Classification System (NAICS), at a reduced cost. The costs of this project were far less than anticipated.

Project: Web Based Report System

Agency: Volunteer Service Commission

Award: \$2,839.99 (Actual Expenditure: \$2,839.99)

The grant funds were used to purchase hardware to allow the agency to submit financial reports through an on-line, federal reporting system.

Project: Creating Digital Access and Archiving of the Conservation and Survey Division Aerial Photography Collection

Agency: UNL - Conservation and Survey Division

Award: \$32,300 (Actual Expenditure: \$32,300)

The Conservation and Survey Division (CSD), University of Nebraska-Lincoln, houses a large and valuable collection of tens of thousands of aerial photographs. The majority of these 9"x9" photographs were taken between the 1930s and 1970s. The grant funds were used to purchase hardware and pay student-workers to convert over 22,000 of these photographs to digital images.

Project: Generic Internet Licensing Application

Agency: DAS - IMServices

Award: \$151,440 (Actual Expenditure: \$47,865.50)

This project, as originally proposed, had three phases intended to create templates for developing on-line licensing applications. Phase I of the project involved surveying state agencies which perform licensing functions. The results of the survey indicated a greater than anticipated disparity in the information collected in license applications. After reviewing the results of Phase I, the State Government Council recommended proceeding with a series of Internet licensing pilot projects. Nebraska Interactive was to create a number of on-line license applications tying into the licensing software used by HHS. Because of delays caused by contract negotiations between the licensing software vendor and HHS, this grant expired before these pilot projects could be implemented. However, with the support of a grant from the State Records Board, these pilot projects are now scheduled to be complete by January 1, 2003.

Project: Lotus Notes Collaboration Research and Test Environment

Agency: DAS - IMServices

Award: \$50,000 (Actual Expenditure: \$24,340.07)

Agencies utilizing Lotus Notes constructed a research and testing infrastructure that allowed agencies to share resources and costs as they explored the potential of using new technologies to improve their business processes.

2001 Grants

Project: Workforce Investment Act Resource Centers

Agency: Assistive Technology Partnership

Award: \$25,000

Integrates assistive technology solutions into the Workforce Development One Stop Resource Centers to increase awareness of the potential of assistive technology to enhance the employability and productivity of persons with disabilities in competitive employment. The sponsor has signed memorandums of understanding with 7 of the 24 One Stop Center sites. This includes Lincoln, Beatrice, Grand Island, Columbus, Norfolk, and 2 locations in Omaha. Equipment has been purchased for these locations and will be installed by August. Additional training on equipment and referral services will be conducted at each site shortly after the installation.

Project: Security Assessment

Agency: Office of the CIO

Award: \$46,800

The purpose of this grant is to engage a qualified firm to conduct a security audit and security testing of the state's information technology infrastructure. The RFP has been drafted and the next step is to receive input from state agencies.

Project: Creating a Common Framework for Integrating Surface Water Data

Agency: Department of Natural Resources (multiple agencies)

Award: \$25,000

This project is part of a larger collaborative effort to develop a standardized, statewide, surface water features database (map), to facilitate the collection and integration of data and public policies of multiple state, local, and federal agencies that make or implement public policies related to Nebraska's surface water. Specifically, this project will develop a digital, (1:24,000-scale) geospatial database (map), with associated attributes, for the surface water features in the Lower Elkhorn Watershed in eastern Nebraska.

Project: Information Technology Support Tools Project

Agency: IMServices (multiple agencies)

Award: \$74,000

The project to implement an IT Support Tools System is a joint project with the Department of Correctional Services, the Department of Labor's Workforce Development group, Health and Human Services System, Workers' Compensation Court, and DAS Information Management Services. These agencies are working together to replace and upgrade aging technical support

software. The system will include problem management (help desk), hardware/software management (technology assets tracking), change management, and knowledge bases.

Project: Enterprise Security Awareness Training

Agency: IMServices

Award: \$36,620

This project will provide security training to security officers, IT staff, and other employees of state agencies.

Project: Enterprise Content Management Study

Agency: IMServices and Workers' Compensation Court

Award: \$100,000

The Enterprise Content Management Project is a two-phase undertaking to address the methodology of systematically organizing the State's electronic information resources so that the resources can be managed, secured, and made available as required. Conceptually, the need for enterprise content management combines interagency business knowledge, policies, information content, work processes, and technology with an overlying architecture that can deliver the content via a flexible, adaptive, portal-based service accessed with a single sign-on.

Project: Mobile Data Computer Project

Agency: State Patrol

Award: \$31,070.25

The objective of the MDC Project is to increase the amount of information provided to four (4) Headquarters Troop traffic officers by installing mobile data computers and 800 MHz radios in their marked patrol vehicles. The MDCs will have connectivity to the City of Lincoln's 800 MHz trunked radio system which allows them wireless, high speed connectivity to the Nebraska State Patrol Switcher. The Switcher is the device that allows access to all Federal and state databases. The project will provide the officers with the tools necessary to access these law enforcement data systems directly. Currently, officers often wait in queue for dispatcher response. The goal of this project is to improve the efficiency and effectiveness of four Nebraska State Patrol troopers. This directive will enhance a pilot project consisting of one officer utilizing the MDC system in cooperation with the City of Lincoln. This project will require the purchase of laptops, computers, wireless network infrastructure hardware, software and licensing. The City of Lincoln is providing the 800 Mhz radios to the Nebraska State Patrol.

Project: Value-Added Book Reviews: Any Time, Any Place

Agency: Library Commission

Award: \$8,322

Provide book reviews on the Web, including oral reviews of books for children and young adults.

Security Architecture

| | |
|------------------------------|---|
| Title | Incident Response and Reporting Procedure for State Government |
| Category | Security Architecture |
| Date Adopted | (Technical Panel Recommends Approval) |
| Date of Last Revision | April 5, 2002 |
| Date of Next Review | June 2004 |

State Agencies shall prepare procedures for reporting security breaches and incidents. Documentation on security incidents shall be filed with the Chief Information Officer for the State of Nebraska.

Explanation / Key Points

Security is a growing problem. Effective response and collective action are required to counteract security violations and activities that lead to security breaches. Agency management, law enforcement, and others must know the extent of security problems in order to make proper decisions pertaining to policies, programs and allocation of resources. Responding to security alerts will help to prevent incidents from occurring. Quick reporting of some incidents, such as new viruses, is essential to stopping them from spreading and impacting other systems. Reporting computer crimes is the only way for law enforcement to deter and apprehend violators.

These guidelines incorporate most of the “CIO Cyberthreat Response and Reporting Guidelines” jointly sanctioned by the FBI and U.S. Secret Service. A copy of those guidelines is available at: http://www.cio.com/research/security/incident_response.pdf, http://www.usss.treas.gov/net_intrusion.shtml, or <http://www.fbi.gov/pressrel/pressrel02/cyberguidelines.htm>.

Effective response to security incidents requires quick recognition of problems and fast mobilization of skilled staff to return systems to normal. This requires prior documentation of procedures and responsibilities of everyone with a role in responding to the emergency. Continuous improvement by eliminating points of vulnerability and applying lessons learned is an essential component of incident response.

Centralized reporting serves the goal of increasing awareness of vulnerabilities and threats to state government as a whole. In particular, centralized reporting is necessary to discern patterns, identify areas of vulnerability, allocate resources, and develop statewide solutions. Centralized reporting does not substitute for internal reporting to management, reporting to law enforcement, or mobilizing a computer security incident response team (CSIRT). Agencies should develop procedures for internal and external

Security Architecture

reporting that will meet the needs of centralized reporting with little or no additional work. The centralized reporting is designed to mesh with the postmortem analysis that should follow each incident.

Security incident response should never include retaliation. Defending a system should emphasize preventing security breaches. If there is an intrusion, a defensive response should focus on containing and eradicating the problem, plugging the security hole and getting back to business. Security incident response should never include striking back against attackers. The appropriate law enforcement authorities should handle all punitive actions.

Applicability

These guidelines apply to all non-education state agencies, boards, and commissions, which receive a direct appropriation from the Legislature or any state agency that has a direct connection to the state's network. Educational institutions and other entities are encouraged to develop their own security incident and centralized reporting procedures.

Planning and Preparation

Develop an incident response plan and designate people to carry it out. The plan should include details for how you will:

1. Detect the incident
2. Analyze the incident
3. Contain or eradicate the problem
4. Provide workarounds or fixes
5. Prevent re-infection
6. Log events
7. Preserve evidence
8. Conduct a post-mortem and apply lessons learned

Educate users to raise security awareness and promote security policies. Build a centralized incident reporting system. Establish escalation procedures that lay out actions the agency should take if an attack turns out to be protracted or especially damaging. Make sure your service-level agreements include provisions for security compliance, and spell out reporting requirements and maintenance of systems (including contingency plans) in the event of a cyberattack. Decide in advance under what circumstances you would call the authorities. Plan how and when employees, customers and strategic partners will be informed of the problem. Establish communication procedures, if the media become involved.

Have a single contact to whom employees should report suspicious events and who will track changes in contacts or procedures. Have a single contact that will report incidents to outside agencies, including law enforcement, regulatory bodies and information sharing organizations such as InfraGard.

Security Architecture

Keep a list of the incident response team members' names, titles and 24/7 contact information, along with their role in a security breach. Have contact information for vendors contracted to help during a security emergency, as well as ISPs and other relevant technology providers. Have contact information for major customers and clients who might be affected. In advance, establish contacts at the relevant law enforcement agencies: typically, the national infrastructure protection and computer intrusion squad at the local FBI field office; the electronic crimes investigator at the local Secret Service field office; and the electronic crimes investigator at the Nebraska State Patrol. Have their contact information easily accessible.

Perform a risk analysis on your plan. Test and rehearse procedures periodically. Develop contingency Plans in case your response infrastructure is attacked.

What to Report

The ultimate goal of security incident response and centralized reporting is to protect data and prevent obstruction of government operations. It is important to distinguish between problems that stem from mistakes or miscommunications and true security incidents that involve either malicious intent or intent to circumvent security measures. Security incident reporting should be used only for true security incidents. You should report events that have a real impact on your organization (such as when damage is done, access is achieved by the intruder, loss occurs, web pages are defaced, malicious code is implanted) or when you detect something noteworthy or unusual (new traffic pattern, new type of malicious code, specific IP as source of persistent attacks). Do not report routine probes, port scans, or other common events.

A security incident includes, but is not limited to the following events, regardless of platform or computer environment:

1. Evidence of tampering with data;
2. Denial of service attack on the agency;
3. Web site defacement;
4. Unauthorized access or repeated attempts at unauthorized access (from either internal or external sources);
5. Social engineering incidents;
6. Virus attacks which adversely affect servers or multiple workstations;
7. Other incidents that could undermine confidence and trust in the state's information technology systems.

When and How to Report an Incident

If an attack is under way, you should call your previously established law enforcement contact immediately and communicate the basic information that is included in the Computer Incident Reporting Short Form. There is additional information that will be required to effectively conduct the investigation (see bullet points below), but the form is a good place to start. Sometimes you will report an incident to law enforcement after the fact—you have detected that something happened, but your systems are functioning normally and whatever damage is likely has already been done. In this case, you will

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want to gather as much information as possible for the law enforcement agents before you make the call. Here is some additional information that will help law enforcement agents in their investigation:

1. What are the primary systems involved?
2. How was the attack carried out?
3. What steps have you taken to mitigate or remediate?
4. Does a suspect exist? If so, is it a current or former employee/contractor?
5. What evidence is available to assist in the investigation (e.g., log files, physical evidence, etc.)? To track the status of your case once you've filed a report, contact the field office that is conducting the investigation.

Who to Notify

FBI – Omaha Office

InfraGard Coordinator

Phone (405) 290-3685

Fax (405) 290-3885

infragard-om@fbi.gov

Nebraska State Patrol

Capt. Robert E. Thorson

Investigative Services

Nebraska State Patrol

1600 Highway 2

Lincoln, Nebraska 68509-4907

Ph. 402-479-4947; Fax:

rthorson@nsp.state.ne.us

Sgt. Scott Christensen

Coordinator

Internet Crimes Against Children Unit

Nebraska State Patrol - Omaha

4411 So. 108th Street

Omaha, Nebraska 68137

Ph. 402-595-2410; Fax: 402-697-1409

24 hr dispatch number is 402-331-3333.

schrste@nsp.state.ne.us

www.nsp.state.ne.us

Office of the CIO / NITC (state agencies, only)

Steve Schafer

Chief Information Officer

521 South 14th Street, Suite 200

Lincoln, Nebraska 68508-2707

Ph. 402-471-4385; Fax: 402-471-4608

slschafe@notes.state.ne.us

Security Architecture***Step-by-step procedure(s)***

The Incident Response and Centralized Reporting Procedure for State Government requires that the agency implement the following steps for a complete security incident handling process.

1. Establish general procedures for responding to incidents;
2. Prepare to respond to incidents;
3. Analyze all available information to characterize an incident;
4. Communicate with all parties that need to be made aware of an incident and its progress;
5. Collect and protect information associated with an incident;
6. Apply short-term solutions to contain an incident;
7. Eliminate all means of vulnerability pertaining to that incident;
8. Return systems to normal operation;
9. Closure: Identify and implement security lessons learned.

Step 1: Establish a computer security incident response team (CSIRT) that can take responsibility for managing security incidents. The CSIRT can be a virtual team that includes people with a wide range of expertise. Agencies should consider forming a CSIRT that serves multiple entities. A clear description of roles and expectations is essential.

Step 2: Set methods for placing the CSIRT on alert status and ready to take preventative measures. It should include procedures for activating the team once an incident occurs.

Step 3: Identify and understand the incident. Use the Information Systems Administrator's Incident Reporting form to document the incident.

Step 4: Contact managers and users affected by an incident, security personnel, law enforcement agencies, vendors, the CERT Coordination Center (<http://www.cert.org/>), and other CSIRTs external to the organization as necessary. It is essential that each agency establishes and follows a single channel of communication. Multiple sources of information while the incident is underway creates confusion, interrupts the work of the response team, and increases vulnerability if the perpetrator is monitoring communications within the agency. It is required that the Computer Incident Reporting Short Form be completed and forwarded to the Nebraska State CIO.

Step 5: Collect and preserve as much evidence in its original form as possible. Take detailed notes of all evidence found and record each piece of evidence. It is important not to rush. Be aware not to destroy or modify any evidence. If necessary, use low-level copying methods to make a complete copy of the disk and memory state of the affected host(s).

Security Architecture

Step 6: As necessary the CSIRT should, (A) physically isolate the affected host(s); (B) change all passwords or disable all accounts on all systems to which the attacker may have had access; (C) disable access to compromised file or data systems that are shared with other computers. Continue to monitor system and network activities

Step 7: The CSIRT should review local operating system and configuration files for signs of intrusion and remove any means for intruder access including changes made by an intruder. Next, determine if there are uncorrected system or network vulnerabilities and correct them. Last, improve protection mechanisms to limit the exposure of networks and systems.

Step 8: Determine the requirements and timeframe for returning the system to normal operation. Members of the CSIRT should restore the operating system, applications and data from trusted media and reconnect the restored system to the network. The CSIRT should validate the restored system for potential vulnerabilities.

Step 9, “Closure” is intended to give the organization an opportunity to learn from the experience of responding to an incident. Every successful intrusion or other incident indicates potential weaknesses in systems, networks, operations, and staff preparedness. These weaknesses provide opportunities for improvement. Steps should include the following points (from CERTCC security practices, <http://www.cert.org/security-improvement/practices/p052.html>):

1. Hold a post mortem analysis and review meeting with all involved parties. Do this within three to five working days of completing the investigation of an intrusion. Use the attached Information Systems Administrator’s Incident Reporting Form to gather information and guide discussion.
2. Prepare a final report for senior management. This ensures awareness of security issues. Use either the Computer Incident Reporting Short Form or the Information Systems Administrator’s Incident Reporting Form to report information about the security incident to the Office of the Chief Information Officer. Incidents should be reported no later than 5 working days after returning systems to normal operation.
3. Revise security plans and procedures and user and administrator training to prevent future incidents. Include any new, improved methods resulting from lessons learned.
4. Determine whether or not to perform a new risk analysis based on the severity and impact of an intrusion.
5. Take a new inventory of your system and network assets.
6. Participate in investigation and prosecution, if applicable.

Related Rules

Draft security standards for the federal Health Insurance Portability and Accountability Act (HIPAA) would establish administrative procedures to guard data integrity, confidentiality, and availability. These include security incident procedures (45 CFR

Security Architecture

Part 142.308 (a)(9):

“(9) Security incident procedures (formal documented instructions for reporting security breaches) that include all of the following implementation features:

“(i) Report procedures (documented formal mechanism employed to document security incidents).

“(ii) Response procedures (documented formal rules or instructions for actions to be taken as a result of the receipt of a security incident report).”

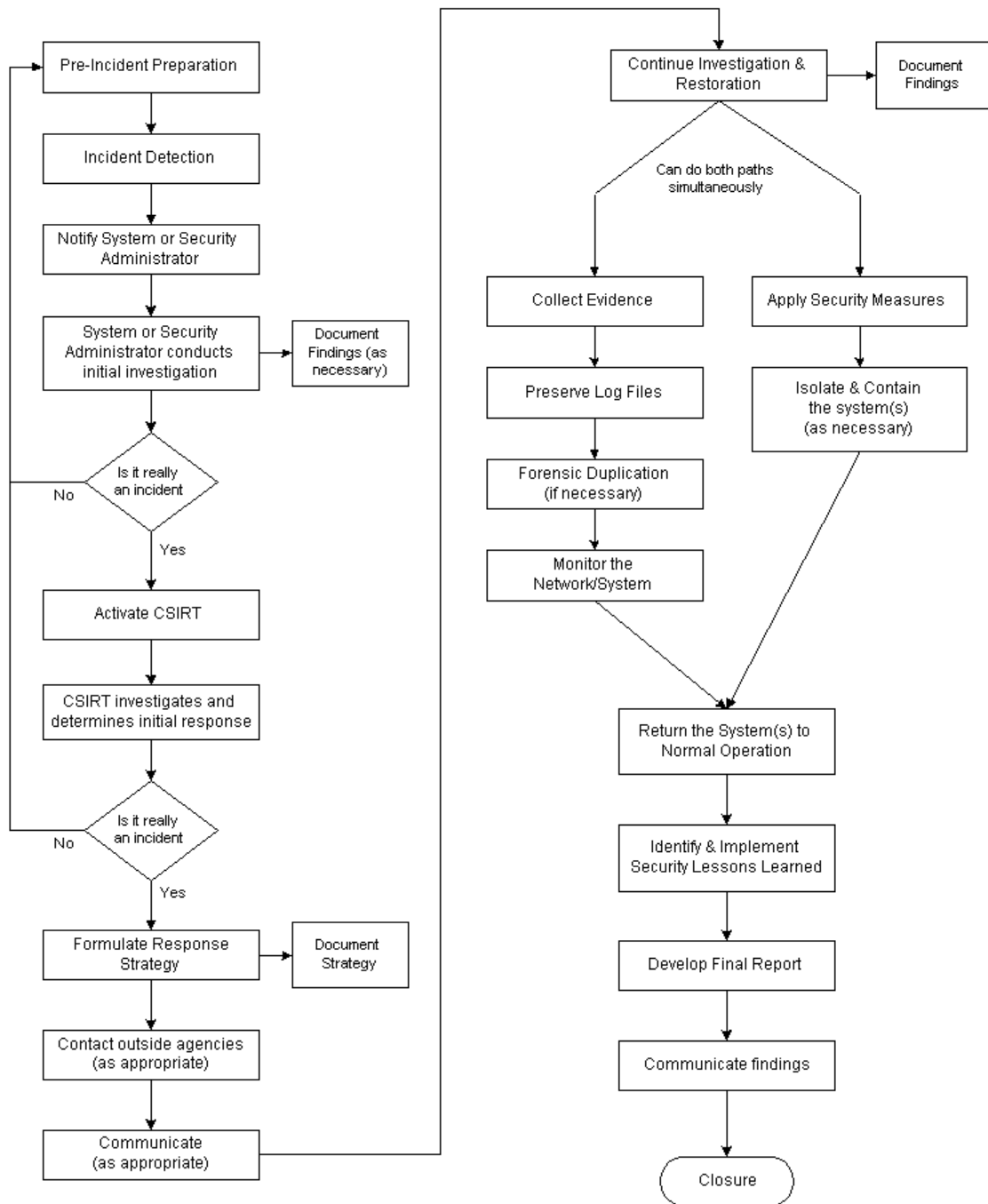
Attachments/ Forms

Incident Response Process Flow Chart

Computer Incident Reporting Short Form

Information Systems Administrator’s Incident Reporting Form

Incident Response Process



COMPUTER INCIDENT REPORTING SHORT FORM

Use this form to report incidents to the Office of the Chief Information Officer of the State of Nebraska. State agencies should send an electronic copy to slschafe@notes.state.ne.us, or fax it to (402) 471-4608. This form also outlines the basic information that law enforcement needs on a first call.

STATUS

☐ Site Under Attack ☐ Past Incident ☐ Repeated Incidents, unresolved

CONTACT INFORMATION

Name _____ Title _____
Organization _____
Direct-Dial Phone _____ E-mail _____
Legal Contact Name _____ Phone _____
Location/Site(s) Involved _____
Street Address _____
City _____ State _____ ZIP _____
Main Telephone _____ Fax _____
ISP Contact Information _____

INCIDENT DESCRIPTION

☐ Denial of Service ☐ Misuse of Systems (internal or external)
(Includes inappropriate use by employees)
☐ Distributed Denial of Service ☐ Probe/Scan
☐ Intrusion/Hack ☐ Unauthorized Electronic Monitoring (sniffers)
☐ Malicious Code (virus, worm) ☐ Website Defacement
☐ Other (specify) _____

DATE/TIME OF INCIDENT DISCOVERY

Date _____ Time _____
Duration of Attack _____

IMPACT OF ATTACK

☐ Loss/Compromise of Data ☐ System Downtime
☐ Damage to Systems ☐ Other Organizations' Systems Affected
☐ Financial Loss (estimated amount: \$ _____)
☐ Damage to the Integrity or Delivery of Critical Goods, Services or Information

SEVERITY OF ATTACK, INCLUDING FINANCIAL LOSS OR INFRASTRUCTURE

☐ High ☐ Medium ☐ Low ☐ Unknown

SENSITIVITY OF DATA

☐ High ☐ Medium ☐ Low ☐ Unknown

How did you detect This? _____
Have you contacted law enforcement about this incident before? Who & when? _____
Has the incident been resolved? Explain _____

State of Nebraska Information Systems Administrator's Incident Reporting Form

Point of Contact Information

| | |
|-----------------------|--|
| Name | |
| Title | |
| Telephone/Fax Numbers | |
| Email | |
| Agency | |

B. Incident Information

| | |
|--|--|
| 1. Background Information: | |
| a. Agency (if same as above, enter "SAME"): | |
| b. Physical Location(s) of affected computer system/network (be specific): | |
| c. Date/time of the incident: | |
| d. Duration of the incident: | |
| e. Is the affected system/network critical to the agency's mission? (Yes/No) | |

| | |
|---|--|
| 2. Nature of Problem (check all that apply): | |
| a. Intrusion | |
| b. System impairment/denial of access | |
| c. Unauthorized root access | |
| d. Web site defacement | |
| e. Compromise of system integrity | |
| f. Hoax | |
| g. Theft | |
| h. Damage | |
| i. Unknown | |
| j. Other (provide details in remarks) | |
| k. REMARKS: | |
| | |

| | |
|---|--|
| 3. Has your agency experienced this problem before? (Yes/No; If yes, please explain in the remarks section.) | |
| a. REMARKS: | |

| | |
|---|--|
| 4. Suspected method of intrusion/attack: | |
| a. Virus (provide name, if known) | |
| b. Vulnerable exploited (explain) | |
| c. Denial of Service | |
| d. Trojan Horse | |
| e. Distributed Denial of Service | |
| f. Trapdoor | |
| g. Unknown | |
| h. Other (Provide details in remarks) | |
| i. REMARKS: | |

| | |
|---|--|
| 5. Suspected perpetrator(s) or possible motivation(s) of the attack: | |
| a. Insider/Disgruntled Employee | |
| b. Former employee | |
| c. Other (Explain remarks) | |
| d. Unknown | |
| e. REMARKS: | |

| |
|---|
| 6. The apparent source (IP address) of the intrusion/attack: |
|---|

| |
|---|
| 7. Evidence of spoofing (Yes/No/Unknown) |
|---|

| | |
|---|--|
| 8. What computers/systems (hardware and software) were affected (Operating system, version): | |
| a. Unix | |
| b. OS2 | |
| c. Linux | |
| d. VAX/VMS | |
| e. NT | |

| | |
|--------------------------------------|--|
| f. Windows | |
| g. Sun OS/Solaris | |
| h. Other (Please specify in remarks) | |
| i. REMARKS: | |

| | |
|--|--|
| 9. Security Infrastructure in place. (Check all that apply) | |
| a. Incident/Emergency Response Team | |
| b. Encryption | |
| c. Firewall | |
| d. Secure Remote Access/Authorization Tools | |
| e. Intrusion Detection System | |
| f. Security Auditing Tools | |
| g. Banners | |
| h. Packet filtering | |
| i. Access Control Lists | |
| j. REMARKS: | |

| | |
|--|--|
| 10. Did intrusion/attack result in a loss/compromise of sensitive or information classified as private? | |
| a. Yes (provide details in remarks) | |
| b. No | |
| c. Unknown | |
| d. REMARKS: | |

| | |
|--|--|
| 11. Did the intrusion/attack result in damage to system(s) or data? | |
| a. Yes (provide details in remarks) | |
| b. No | |
| c. Unknown | |
| d. REMARKS: | |

| |
|---|
| 12. What actions and technical mitigation have been taken? |
|---|

| | |
|--|--|
| a. System(s) disconnected from the network? | |
| b. System Binaries checked? | |
| c. Backup of affected system(s)? | |
| d. Log files examined? | |
| e. Other (Please provide details in remarks) | |
| f. No action(s) taken | |
| g. REMARKS: | |

| | |
|---|--|
| 13. Has law enforcement been notified? (Check all that apply.) | |
| a. Yes-local law enforcement | |
| b. Yes-Nebraska State Patrol | |
| c. Yes-FBI field office | |
| d. Not | |
| e. REMARKS: | |

| | |
|---|--|
| 14. Has another agency/organization been informed as assisted with the response? | |
| a. Yes-Information Management Services | |
| b. Yes-Division of Communications | |
| c. Yes-CERT-CC | |
| d. Yes-Other (provide details in remarks) | |
| e. No | |
| f. REMARKS: | |

| |
|--------------------------------|
| 15. Additional Remarks: |
|--------------------------------|

If the reported incident is a criminal matter, you may be contacted by law enforcement for additional information.

C. Closure Information (Optional, Except 9 & 10)

1. (Optional) Did your detection and response process and procedures work as intended? If not, where did they not work? Why did they not work?

REMARKS:

2. (Optional) Methods of discovery and monitoring procedures that would have improved your ability to detect an intrusion.

REMARKS:

3. (Optional) Improvements to procedures and tools that would have aided you in the response process. For example, consider using updated router and firewall filters, placement of firewalls, moving the compromised system to a new name or IP address, or moving the compromised machine's function to a more secure area of your network.

REMARKS:

4. (Optional) Improvements that would have enhanced your ability to contain an intrusion.

REMARKS:

5. (Optional) Correction procedures that would have improved your effectiveness in recovering your systems.

REMARKS:

6. (Optional) Updates to policies and procedures that would have allowed the response and recovery processes to operate more smoothly.

REMARKS:

7. (Optional) Topics for improving user and system administrator preparedness.

REMARKS:

8. (Optional) Areas for improving communication throughout the detecting and response processes.

REMARKS:

9. (Required) A description of the costs associated with an intrusion, including a monetary estimate if possible.

REMARKS:

10. (Required) Summary of post mortem efforts.

REMARKS:

Hardware Architecture

| | |
|------------------------------|---|
| Title | Minimum Workstation Configuration Guidelines |
| Category | Hardware Architecture |
| Date Adopted | (Technical Panel Recommends Approval with Annual Review) |
| Date of Last Revision | September 14, 2001 |
| Date of Next Review | June 2003 |

A. Authority

Section 86-1506 (6). "(The Nebraska Information Technology Commission shall) adopt minimum technical standards, **guidelines**, and architectures upon recommendation by the technical panel created in Section 86-1511."

B. Purpose and Objectives

The purpose of this document is to recognize the responsibility of the NITC to establish recommended **minimum** configurations for personal computers. Minimum configurations are established in order to simplify technical support and enable a secure desktop environment. Minimum configuration guidelines established by the NITC will (must) change over time in response to requirements of newer applications or operating systems.

These guidelines provide a suggested set of minimum configurations that agencies can adopt or modify to meet their specific needs. These guidelines are not intended to endorse or support any single hardware or software vendor. These guidelines are subject to periodic review and revision.

As minimum configurations, these guidelines are recommendations to be considered in conjunction with other factors, including financial constraints, performance requirements of specific applications, and an agency's networking environment.

The primary objective of these guidelines include recommendations to:

- A. Improve versatility and compatibility of desktop systems;
- B. Insure that personal computer configurations procured with state funds can operate efficiently in today's high speed connected environment;
- C. Provide a guide to agency on when to upgrade existing personal computers;
- D. Reduce technical support problems; and,
- E. Provide a secure desktop operating system.

As the State of Nebraska begins to develop Internet enabled applications, and e-Government and e-Business applications that are delivered over public and private Intranets and the Internet, it is imperative that agencies maintain desktop clients that can efficiently run these new applications. Agency desktop personal computers should be able to:

- 1. Execute network applications;
- 2. Support Internet technologies;

Hardware Architecture

3. Extend the desktop communications to the state telecommunications backbone;
4. Support e-Business and e-Government applications; and,
5. Provide desktop security, encryption, and virus protection services when connected to the state telecommunications systems.

C. Standards and Guidelines

1. Agencies and institutions should manage desktop workstations as assets. This concept is similar to good management of other physical assets. It should include a planning process for determining, adopting, and periodically upgrading the minimum workstation configurations that meet the agency or institution's specific internal needs and any new external requirements. Requirements for new Business applications or mandated operating system upgrades should be the basis for capacity planning. Capacity planning should address options for implementation such as phasing in new purchases, moving older workstations to less demanding uses, or surplusing.

2. Existing Personal Computers:

Agencies should develop a plan to upgrade or replace existing personal computers if they do not support the following minimum system requirements:

Minimum Hardware Guidelines for Existing Personal Computers

- (1) CPU: 133 MHz or higher Intel or equivalent CPU
- (2) Memory: 64 MB RAM
- (3) Hard Disk: 2 GB hard disk with a minimum of 650MB of free space
- (4) Operating System:
 - (a) Windows 98, 2nd Edition (physical security policies should be in place)
- (5) LAN Connection (either depending on agency LAN configuration):
 - (a) Ethernet 10/100
 - (b) 4/16Mb Token Ring

3. Minimum New Personal Computer Purchasing Guidelines:

When purchasing new personal computers, an agency should consider the following minimum guidelines.

- a. Standard Desktop Hardware

- (1) CPU: 500 MHz Intel or equivalent CPU or higher
- (2) Memory: 128 MB RAM or higher
- (3) Disk: 6 GB or larger
- (4) LAN Connection: (either depending on agency LAN configuration):
 - (a) Ethernet: 10/100 Mb
 - (b) 4/16 Mb Token Ring
- (5) Operating System:
 - (a) Windows 2000 (recommended) or
 - (b) Windows NT 4.0 Service Pack 6a, (with 128 MB RAM and 128 bit encryption) or
 - (c) Windows XP (requires 256 MB RAM)

Hardware Architecture

- b. GIS Workstation Desktop Hardware
 - (1) CPU: 500 MHz Intel or equivalent CPU or higher (650 MHz or higher recommended)
 - (2) Memory: 128 MB RAM (256 MB RAM recommended)
 - (3) Disk: 10 GB or larger (e.g., SCSI)
 - (4) LAN Connection: (either depending on agency LAN configuration):
 - (a) Ethernet: 10/100 Mb
 - (b) 4/16 Mb Token Ring
 - (5) Operating System:
 - (a) Windows 2000 (recommended) or
 - (b) Windows NT 4.0 Service Pack 6a, (with 128 MB RAM and 128 bit encryption) or
 - (c) Windows XP (requires 256 MB RAM)
- c. Server Hardware:
 - (1) CPU: 500 MHz Intel or equivalent CPU or higher (650 MHz or higher recommended)
 - (2) Memory: 256 MB RAM minimum
 - (3) Disk: 10 GB Fast Open or larger (e.g., SCSI)
 - (4) LAN Connection:(either depending on agency LAN configuration):
 - (a) 10/100 Mb (Fast Ethernet if available)
 - (b) 4/16 Mb Token Ring
 - (5) Operating System:
 - (a) Windows 2000 (recommended) or
 - (b) Windows XP Server
- 4. Software Recommendations:
 - (1) Office Productivity: MS Office 2000 Standard Edition (recommended)
 - (2) Simple Terminal Emulation:
 - (a) TELNET3270 or
 - (b) TELNET5250
 - (3) Advanced 3270/5250 Terminal Emulation with Host Addressable Printing
 - (a) IBM Host Client Access Package
 - (4) Internet Browser:
 - (a) MS Explorer 5.0 or higher with 128-bit encryption, and XML compliance. or
 - (b) Netscape 4.78 or higher with 128-bit encryption, and XML compliance.
 - (5) Virus Protection:
 - (a) Anti-Virus software (Norton Anti-Virus recommended)
 - (b) Anti-Virus subscription service to protect against newest attacks
- 5. All agencies and local government agencies that utilize networking services of the Nebraska Department of Administrative Services' Information Management Services Division and/or the Division of Communications should migrate to Windows NT 4.0 or Windows 2000 Professional in order to support network security.

Hardware Architecture

6. Any agency or local government agency that operates a direct connection to the public Internet shall implement security procedures that are consistent with NITC security policies, including firewall services.
7. All agencies that receive public Internet e-mail service shall implement security procedures that are consistent with NITC security policies, including the requirement of virus protection on the desktop or mail server.

D. Key Definitions

1. Agency shall mean any governmental entity, including state government, local government, or third party entities under contract to the agency.
2. Networking Services shall mean any system that transmits any combination of voice, video, and/or data between users.

E. Applicability

These guidelines are intended to be sufficiently generic to apply to a wide range of governmental and educational agencies in the State of Nebraska.

Agencies should follow these guidelines whenever they intend to support networking services on the desktop. The guidelines may not apply whenever the desktop does not share network services, when there is no connection to state or local networking services, or whenever an application requires a different hardware and software configuration to perform a specific function.

F. Responsibility

1. Division of Communications The Division of Communications has the statutory responsibility to coordinate all communications functions and activities of State government. Communications is defined as the transmission, emission, or reception of signs, signals writing, images, and sounds or intelligence of any nature by wire, radio, optical or other electromagnetic systems.
2. Information Management Services Division
3. Nebraska Information Technology Commission. The NITC provides strategic direction for state agencies and educational institutions in the area of information technology. The NITC also has statutory responsibility to adopt minimum technical standards and guidelines for acceptable and cost-effective use of information technology. Implicit in these requirements is the responsibility to promote adequate accessibility for information systems through adoption of policies, standards, and guidelines.

G. Related Policies, Standards and Guidelines

Accessibility Policy

Hardware Architecture

| | |
|------------------------------|---|
| Title | Minimum Workstation Configuration Guidelines for K-12 Public Education |
| Category | Hardware Architecture |
| Date Adopted | (Technical Panel Recommends Approval with Annual Review) |
| Date of Last Revision | March 12, 2002 |
| Date of Next Review | June 2003 |

A. Authority

Section 86-1506 (6). "(The Nebraska Information Technology Commission shall) adopt minimum technical standards, **guidelines**, and architectures upon recommendation by the technical panel created in Section 86-1511."

B. Purpose and Objectives

The purpose of this document is to recognize the responsibility of the NITC to establish recommended **minimum** configurations for personal computers. Minimum configurations are established in order to simplify technical support and enable a secure desktop environment. Minimum configuration guidelines established by the NITC will (must) change over time in response to requirements of newer applications or operating systems.

These guidelines provide a suggested set of minimum configurations that schools and districts can adopt or modify to meet their specific needs. These guidelines are not intended to endorse or support any single hardware or software vendor. These guidelines are subject to periodic review and revision.

As minimum configurations, these guidelines are recommendations to be considered in conjunction with other factors, including financial constraints, performance requirements of specific applications, and the networking environment of a school or district.

The primary objective of these guidelines include recommendations to:

- A. Improve versatility and compatibility of desktop systems;
- B. Insure that personal computer configurations procured with state funds can operate efficiently in today's high speed connected environment;
- C. Provide a guide to schools and districts on when to upgrade existing personal computers;
- D. Reduce technical support problems; and,
- E. Provide a secure desktop operating system.

As the State of Nebraska begins to develop Internet enabled applications, and e-Government and e-Business applications that are delivered over public and private Intranets and the Internet, it is imperative that schools and districts maintain desktop clients that can efficiently run these new applications. Computers should be able to:

1. Execute network applications that adhere to open standards;

Hardware Architecture

2. Support Internet technologies that adhere to open standards;
3. Extend the desktop communications to the state telecommunications backbone;
4. Support those e-Business and e-Government applications that are appropriate for K-12 environment; and,
5. Provide desktop security, encryption, and virus protection services when connected to the state telecommunications systems.

C. Standards and Guidelines

1. K-12 institutions should endeavor to manage computers as assets. This concept is similar to good management of other physical assets. Technology Plans submitted to the State Department of Education include a planning process for determining, adopting, and periodically upgrading the workstation configurations that meet the school's or district's specific internal needs and any new external requirements. Technology Plans will address options for implementation such as phasing in new purchases, moving older computers to less demanding uses, or surplusing.

2. Existing Personal Computers:

Schools and Districts should be advised to develop a plan to upgrade or replace existing personal computers if they do not support the following minimum system requirements:

Minimum Hardware Guidelines for Existing Personal Computers

- (1) CPU: 233 MHz (Intel or equivalent CPU, PowerPC, SPARC)
- (2) Memory: 64 MB RAM
- (3) Hard Disk: 2 GB hard disk with a minimum of 650MB of free space
- (4) Operating System:
 - (a) Windows 95, **2nd Edition (physical security policies should be in place)**
 - (b) Mac OS 7.6.1
- (5) LAN Connection:
 - (a) Ethernet 10Mb

3. Minimum New Personal Computer Purchasing Guidelines:

When purchasing new personal computers, schools or districts should consider the following minimum guidelines.

- a. Standard Desktop Hardware
 - (1) CPU: 1 GHz Intel or equivalent CPU, 500 MHZ G3, 400 MHZ SPARC, or higher
 - (2) Memory: 256 MB RAM
 - (3) Disk: 40 GB
 - (4) LAN Connection:
 - (a) Ethernet: 10/100 Mb
 - (5) Operating System:

Hardware Architecture

- (a) Windows 2000 professional(recommended) or Windows XP (requires 256 MB RAM)
 - (b) Mac OS X with Classic environment
- b. Server Hardware:
 - (1) CPU: 700 MHz Intel, (or equivalent), 733 MHZ G4, or 400 MHZ SPARC
 - (2) Memory: 512 MB RAM minimum
 - (3) Disk: 30 GB
 - (4) LAN Connection:
 - (a) 10/100/1000Mb (Fast Ethernet if available)
 - (5) Operating System:
 - (a) Windows 2000 Server (recommended) or Windows XP Server
 - (b) OS X Server
 - (c) Solaris 8
 - (d) Linux
- 4. Software Recommendations:
 - (1) Office Productivity: Current MS Office, AppleWorks 6.2 or Star Office
 - (2) Simple Terminal Emulation:
 - (a) TELNET3270 or
 - (b) TELNET5250
 - (3) Advanced 3270/5250 Terminal Emulation with Host Addressable Printing
 - (a) IBM Host Client Access Package
 - (4) Internet Browser:
 - (a) MS Explorer with 128-bit encryption, and XML compliance (Explorer 6 for Windows and 5.1 for Macintosh). or
 - (b) Netscape 6.2 with 128-bit encryption, and XML compliance.
 - (5) Virus Protection:
 - (a) Anti-Virus software
 - (b) Anti-Virus subscription service to protect against newest attacks
- 5. Any school or district that operates a direct connection to the public Internet shall implement security procedures that are consistent with NITC security policies, including firewall services.
- 6. All schools or districts that receive public Internet e-mail service shall implement security procedures that are consistent with NITC security policies, including the requirement of virus protection on the desktop or mail server.

D. Key Definitions

- 1. Schools and Districts shall mean any public education institution providing instruction to students from Kindergarten to Grade 12 and Educational Service Units.

E. Applicability

Hardware Architecture

This document is intended to provide schools and districts with a set of working guidelines that can be referenced when updating technology plans filed with the State of Nebraska, Department of Education.

Schools and Districts should follow these guidelines whenever they intend to support networking services on the desktop. The guidelines may not apply whenever the desktop does not share network services, when there is no connection to state or local networking services, or whenever an application requires a different hardware and software configuration to perform a specific function.

F. Responsibility

1. Division of Communications The Division of Communications has the statutory responsibility to coordinate all communications functions and activities of State government. Communications is defined as the transmission, emission, or reception of signs, signals writing, images, and sounds or intelligence of any nature by wire, radio, optical or other electromagnetic systems.
2. Information Management Services Division
3. Nebraska Information Technology Commission. The NITC provides strategic direction for state agencies and educational institutions in the area of information technology. The NITC also has statutory responsibility to adopt minimum technical standards and guidelines for acceptable and cost-effective use of information technology. Implicit in these requirements is the responsibility to promote adequate accessibility for information systems through adoption of policies, standards, and guidelines.

G. Related Policies, Standards and Guidelines

Accessibility Policy

Nebraska Information Technology Commission

Project Proposal Form

| | |
|----------------------|--|
| Project Title | Statewide Network Coordination |
| Agency/Entity | DIVISION OF COMMUNICATIONS--DAS |

Project Proposal Form
FY2003-05 Biennium

Section I: General Information

| | |
|--------------------|--------------------------------|
| Project Title | Statewide Network Coordination |
| Agency (or entity) | Division of Communications |

Contact Information for this Project:

| | |
|------------------|--|
| Name | Brenda Decker, Director, DOC |
| Address | Executive Bldg., 521 S. 14 th St., Ste. 300 |
| City, State, Zip | Lincoln, NE, 68506 |
| Telephone | (402) 471-3138 |
| E-mail Address | bdecker@doc.state.ne.us |

Project Proposal Form
FY2003-05 Biennium

Section II: Executive Summary

The State of Nebraska, Division of Communications will continue to contract in accordance with the language expressed in LB1217 of the 2000 Legislature for an individual to: "...support statewide negotiations for efficient and economical access to the frame relay or any other form of land-based telecommunications service which is to benefit any or all agencies and institutions of state government and any or all political subdivisions..."

The NETCOM project is a statewide effort for collaboration and aggregation of telecommunications services across a wide variety of communities of interest such as state government, local government, K-12 education, higher education, libraries, hospitals and economic development. The NITC, as well as numerous communities of interest, endorse this project.

As identified in LB 543 (2001 Budget Bill): "There is included in the appropriation to this program for FY 2002-03 \$75,000 Cash Funds from the Information Technology Infrastructure Fund to be used for the Telecommunications Infrastructure Needs Assessment Project or its successor project, which shall be used for such purpose."

- This Project Proposal is for continuation of the coordination associated with the successor project(s) of the Telecommunications Infrastructure Needs Assessment. Representation for the education community and other participants in the planning, development, and implementation of a state wideband network service will be required during the forthcoming FY2002-03.

Section III: Goals, Objectives, and Projected Outcomes (15 Points)

Specifically, the contract for this individual will provide the following services:

- Participation in the evaluation of potential projects as a continuation of the statewide network (NETCOM) project.
- Assist in the development, distribution, evaluation, and implementation of a possible revised RFP for the service requirements of the NETCOM RFP.
- Participate in various standing and working committees associated with network configuration and deployment across the state, both core networks and upper ISO Model layer networks.
- Provide support in the pricing analysis and evaluation of various proposed network solutions, etc.
- Provide assistance and representation to and for various public entities on committees and with prospective service providers.

Project Proposal Form
FY2003-05 Biennium

- Present support to various public entities in network and application design areas and in discussions/negotiations with prospective service providers.
- Explore and participate in the forthcoming activities involving the State of Nebraska's participation in "Homeland Security and Bio-terrorism".
- Be an active participant in the oversight of the deployment scheduling of a potential state wideband core network.

It is anticipated that this position that will be needed for the entire FY2002-03 time period.

Section IV: Project Justification / Business Case (25 Points)

NETCOM is an acronym for Nebraska Telecommunications, which is the name of the state's data and video communications system. The NETCOM project is an effort to aggregate purchasing power of public entities in order to achieve several goals regarding telecommunications services. The Division of Communications has the statutory responsibility to provide telecommunications services for all state agencies, as well as the ability to provide services for all political subdivisions of government. Over the past two years, this project has been supported through fees to customers, as well as contributions from communities of interest to the project. In the previous budget cycle, the Nebraska Legislature identified funding in the Information Technology fund to continue this project in the FY 2002/2003 timeframe.

Section V: Technical Impact (20 Points)

N/A

Section VI: Preliminary Plan for Implementation (10 Points)

The work associated with this proposal has been on-going over the past two years.

Section VII: Risk Assessment (10 Points)

N/A

Project Proposal Form
FY2003-05 Biennium

Section VIII: Financial Analysis and Budget (20 Points)

The following represents the financial analysis and budget for the past two years of the NETCOM Project, as well as the current year.

| EXPENSES | FY 2001 | FY 2002 (est) | FY 2003 |
|---------------------------|---------------------|----------------------|---------------------|
| Salaries | \$119,615.00 | \$123,914.21 | \$127,210.16 |
| Benefits | 40,669.10 | 42,130.83 | 43,251.45 |
| Operating Expenses | 358,340.00 | 120,500.00 | 95,500.00 |
| Travel | 12,500.00 | 10,500.00 | 4,000.00 |
| TOTAL | \$531,124.10 | \$297,045.04 | \$269,961.61 |
| SOURCES OF FUNDING | | | |
| NITC | 50,000.00 | | |
| IM Services | 10,000.00 | | |
| NET | 80,000.00 | 20,000.00 | |
| Dept of Education | | 10,000.00 | |
| Community Coll Sys | | 6,000.00 | |
| UNL | | 6,500.00 | |
| State Colleges | | 3,000.00 | |
| ESU's | | 36,000.00 | |
| LB 543 | | | 75,000.00 |
| Div of Comm | 391,124.10 | 215,545.04 | 194,961.61 |
| TOTALS | \$531,124.10 | \$297,045.04 | \$269,961.61 |

86-1506

Commission; duties.

The commission shall:

(1) By July 1, 1999, and each July 1 thereafter, adopt policies and procedures used to develop, review, and annually update a statewide technology plan;

(2) Create a technology information clearinghouse to identify and share best practices and new developments, as well as identify existing problems and deficiencies;

(3) Review and adopt policies to provide incentives for investments in information technology infrastructure services;

(4) Determine a broad strategy and objectives for developing and sustaining information technology development in Nebraska, including long-range funding strategies, research and development investment, support and maintenance requirements, and system usage and assessment guidelines;

(5) By September 15, 1998, adopt guidelines regarding project planning and management, information sharing, and administrative and technical review procedures involving state-owned or state-supported technology and infrastructure. Governmental entities, state agencies, and political subdivisions shall submit projects which directly utilize state-appropriated funds for information technology purposes to the process established by sections 86-1501 to 86-1514. Governmental entities and political subdivisions may submit other projects involving information technology to the commission for comment, review, and recommendations;

(6) By September 15, 1998, adopt minimum technical standards, guidelines, and architectures upon recommendation by the technical panel created in section 86-1511;

(7) Establish ad hoc technical advisory groups to study and make recommendations on specific topics, including work groups to establish, coordinate, and prioritize needs for education, local communities, and state agencies;

(8) By November 15 of each even-numbered year, make recommendations on technology investments to the Governor and the Legislature, including a prioritized list of projects, reviewed by the technical panel, for which new or additional funding is requested;

(9) Approve grants from the Community Technology Fund and Government Technology Collaboration Fund;

(10) By September 15, 1998, adopt schedules and procedures for reporting needs, priorities, and recommended projects; and

(11) Provide assistance upon request to the Public Safety Wireless Communication Advisory Board.

Source:

Laws 1998, LB 924, § 6; Laws 1999, LB 446, § 12.

Effective date May 26, 1999.

86-1508

Progress report.

By November 15 of each even-numbered year,
the Nebraska Information Technology Commission shall submit a
progress report to the Governor and Legislature.

Source:

Laws 1998, LB 924, § 8.

81-11,102

Activities under act; reports required.

The commission shall report annually to the Governor and the Appropriations Committee of the Legislature concerning its activities pursuant to the Information Technology Infrastructure Act.

Source:

Laws 1996, LB 1190, § 13; Laws 2000, LB 1349, § 10.

Operative date July 13, 2000.

Section 1

Goals

Section 1

Goals

NITC Vision Statement

Promote the use of information technology in education, health care, economic development, and all levels of government services to improve the quality of life of all Nebraskans.

NITC Mission Statement

"The mission of the Nebraska Information Technology Commission is to make the State of Nebraska's information technology infrastructure more accessible and responsive to the needs of its citizens, regardless of location, while making investments in government, education, health care and other services more efficient and cost effective."

NITC Goals and Objectives

The NITC has adopted the following goals and objectives. The objectives are cross-referenced to specific action-items of the Community Council (CC), Education Council (EC), State Government Council (SGC), and Technical Panel.

1. Support the development of a robust statewide telecommunications infrastructure that is scalable, reliable and efficient. Objectives:
 - 1.1. Facilitate pilot projects to demonstrate the viability of aggregating and leveraging public sector purchases of telecommunications services to promote a robust telecommunications infrastructure (NETCOM). Develop institutional arrangements, define a technical architecture, and adopt a timeline to achieve statewide expansion of the NETCOM infrastructure. (TP 1.1, EC 1.2)
 - 1.2. Study the feasibility of sharing networks and network support functions serving multiple sectors (Nebraska Network Feasibility Study). (TP 1.2, EC 1.1 and 1.3)
 - 1.3. Identify the levels of telecommunication services that different sectors will require, including business, health care, and education. Identify strategies to achieve these levels of service, including the role of communities. Monitor differences in service levels and cost. (TP 1.3)

2. Support the use of information technology to enhance community and economic development. Objectives:
 - 2.1. Provide guidance and assistance to community technology committees, including coordinating efforts to implement the Technologies Across Nebraska action plan. (CC 1)
 - 2.2. Develop a vision and strategy for expanded use of telehealth. (CC 2)
 - 2.3. Support strategies for developing "intellectual infrastructure". (EC 2.1, 4.1, and 4.2)
3. Promote the use of information technology to improve the efficiency and delivery of governmental and educational services, including Homeland Security. Objectives:
 - 3.1. Support planning and coordination of information technology investments relating to Homeland Security. (CIO Staff)
 - 3.2. Support successful implementation of the Nebraska Information System (NIS). (TP 3.1)
 - 3.3. Support implementation of the state's E-government strategy. (SGC 1.1, 1.2, and 1.3)
 - 3.4. Adopt technical standards, guidelines and enterprise methods to promote efficient use of information technology. (SGC 2.1 and TP 2.1)
 - 3.5. Promote activities to protect the security of information technology systems. (SGC 2.1; TP 1.2 and 2.1)
 - 3.6. Define the role of the NITC with respect to local government technology issues, and the relationship of the NITC to existing state and local coordinating entities. (CIO Staff)
4. Promote effective planning, management and accountability regarding the state's investments in information technology. Objectives:
 - 4.1. Evaluate the existing procedures for project planning and management and technical review of state-owned or state-supported information technology investments. (EC 3.1; SGC 3.1 and 3.2; TP 3.1)
 - 4.2. Document progress in achieving the goals and objectives of the NITC. (CIO Staff)
 - 4.3. Assist the Governor and Legislature by reviewing technology-related budget requests and providing a prioritized list of projects. (TP 3.1)

NITC/CIO Customer Service Policy

General Statement of Operations

The NITC and the Chief information Officer (CIO) emphasize collaboration for establishing goals and carrying out their statutory duties. Success of the NITC and the CIO depends on the willing cooperation of independent, public and private, state and local, entities. State statute explicitly recognizes the importance of "coordinating the state's investments in information technology in an efficient and expeditious manner." (Section 86-1502) The same statute directs the NITC and CIO to achieve this goal in a manner that does not "impede the rapid deployment of appropriate technology or establish cumbersome regulations or bureaucracy. "

Customer Service Strategy

1. Open Process and Participation

Good customer relations require involving representatives of all relevant perspectives in the decision-making process. The NITC has sought to achieve this by insuring broad-based representation on the Community, Education and State Government Councils. In addition, the Statewide Technology Plan provides a means for including the work of other coordinating bodies, such as the Geographical Information System (GIS) Steering Committee and Criminal Justice Information Systems (CJIS) Advisory Committee.

2. Communication

The NITC promotes good communication by making effective use of the Internet. Meeting notices, agendas, minutes, and working documents are posted on the NITC website (www.nitc.state.ne.us). Councils and workgroups have fully developed websites that are linked to the NITC homepage. In addition, NITC publishes an electronic newsletter (NITC.news), which has a distribution list of over 800 individuals.

3. Executive Branch Relations

The Lieutenant Governor serves as chair of the NITC and has direct supervisory authority over the CIO. Gubernatorial appointees or their representatives serve on the NITC, Community Council, Education Council, State Government Council, Technical Panel, GIS Steering Committee, GJIS and

Goals

Nebraska Intergovernmental Data Advisory Council (NIDCAC). Many state agencies are members on one or more of these groups.

4. Judicial Branch Relations

The State Court Administrator has a representative on the State Government Council. The CIO is a member of the Criminal Justice Information Systems (CJIS) Advisory Committee, which promotes data sharing among all entities involved in criminal justice.

5. Legislative Branch Relations

The NITC has invited chairs of the Appropriations and Transportation Committees to discuss their interests regarding the proper role of the NITC. Both committees share oversight responsibilities that include conducting a performance review of the NITC every two years (Section 86-1514). In addition, the Legislature confirms appointments to the NITC and the position of CIO. The Legislative Fiscal Office has a representative on the State Government Council.

6. Local Government Relations

The CIO and the NITC will promote a good working relationship with associations representing local governments for cities, counties, schools and colleges. Representatives of local government serve on the Community Council, GIS Steering Committee, and CJIS.

7. Private Sector Involvement

The NITC has used meetings with telecommunications providers to discuss topics of mutual interest. The Community Council, Education Council, State Government Council and several workgroups include representatives from private sector organizations.

8. Public Involvement

The NITC and CIO promote public involvement by providing a significant amount of information on the NITC web site. This includes meeting notices, agendas, minutes and important documents.

Section 2

Council Priorities And Action Plans

Section 2**Council Priorities and Action Plans****Authority**

"The Commission shall: ... establish ad hoc technical advisory groups to study and make recommendations on specific topics, including work groups to establish, coordinate, and prioritize needs for education, local communities, and state agencies." [Neb. Rev. Stat. Section 86-1507(7)]

"A technical panel is created. The technical panel shall be comprised of one representative from the Nebraska Educational Telecommunication Commission, one representative from the Department of Administrative Services, one representative from the University of Nebraska Computing Services Network, one representative from the project sector, and such other members as specified by the Nebraska Information Technology Commission." [Neb. Rev. Stat. Section 86-1511(1)]

Overview

The NITC has established three advisory groups -- Community Council, Education Council, and State Government Council -- to provide input and make recommendations regarding their sectors of interest. Each council has a charter, adopted by the NITC, which establishes the council membership, responsibilities, and meeting procedures. Procedures for establishing advisory groups and the charters of these three councils are located at <http://www.nitc.state.ne.us>.

The Technical Panel is a statutory body, which provides technical analysis and recommendations to the Commission. The Technical Panel has a charter, adopted by the NITC, which establishes the panel membership, responsibilities, and meeting procedures. The charter is located at <http://www.nitc.state.ne.us>.

The NITC also recognizes the important contributions of other information technology coordinating entities, such as the Criminal Justice Information Systems (CJIS) Advisory Committee, and the Geographic Information Systems (GIS) Steering Committee.

CJIS includes representatives of state and local agencies involved in all aspects of criminal justice. Established by the Nebraska Commission on Law Enforcement and Criminal Justice, the CJIS Advisory Committee conducts strategic planning and sponsors automation and data sharing projects. The CJIS Advisory Committee periodically briefs the NITC on its activities and receives some funding from the Information Technology Infrastructure Fund, which requires NITC oversight. The CJIS Advisory Committee recently added the Chief Information Officer to its membership. Further information about the CJIS Advisory Committee is available at: <http://www.cjis.state.ne.us/>.

Council Priorities and Action Plans

The Legislature established the GIS Steering Committee in 1991 (Sections 81-2601 through 81-2605), in an effort to coordinate the implementation of GIS technology by state and local governments in Nebraska. Membership on the GIS Steering Committee includes local, state, and federal representatives. The GIS Steering Committee has prepared a strategic plan ("Building a Spatial Data Infrastructure for Nebraska - December 2001"), with long-range goals and shorter-term initiatives. The Chief Information Officer represents the Director of the Department of Administrative Services on the GIS Steering Committee. Further information about the GIS Steering Committee is available at: <http://www.calmit.unl.edu/gis/>.

The NITC encourages other information technology coordinating entities to collaborate with the NITC and its advisory councils.

Community Council

Background

The Community Council is an advisory committee composed of representatives from rural and community IT development, local governments and libraries, telehealth, resource providers, and other groups as deemed appropriate by the Community Council and the NITC. The Council's purpose is to identify, prioritize, and coordinate user needs with respect to community information technology.

Mission

The mission of the Community Council is to foster the collaborative and innovative use of technology through partnerships between public and private sectors, to improve teleliteracy, and to support community and economic development for Nebraska citizens.

Membership

The Community Council has 18-24 members from each of its three focus areas (rural and community information technology development, local governments and libraries, and telehealth), resource providers, and other groups as deemed appropriate by Community Council and the NITC.

Priorities

The Community Council will pursue activities that support efforts to:

- CC 1. Develop leadership capacity in Nebraska's communities to address IT development.
- CC 2. Promote the development of an infrastructure (including sufficient bandwidth) that is secure, affordable, reliable, and responsive to the specific needs of various sectors. Efforts should be made to ensure that systems across the state are compatible.
- CC 3. Support the development of the intellectual infrastructure necessary for Information Age development. Intellectual infrastructure includes the development of a workforce knowledgeable of and fluent in the use and applications of information technology and the availability of IT support services.
- CC 4. Encourage the use of information technology to enhance community and economic development.
- CC 5. Foster awareness and collaborative and innovative uses of information technology by local governments to reduce costs, improve efficiency, and provide better customer service.

Council Priorities and Action Plans

Education Council

Background

The Education Council is a 16-member advisory committee composed of representatives from K-12, postsecondary education, and four state agencies. The purpose of the Council is to identify, prioritize, and coordinate user needs with respect to educational information technology.

Mission

The mission of the Education Council is to advise the Commission concerning education information technology needs, goals, and policy. The Council will identify, coordinate, and prioritize matters pertaining to information technology for a more strategic and cost-effective approach to developing the State's education information technology infrastructure.

Membership

The Council has 16 members, eight representing the K-12 sector, eight representing the postsecondary sector, and four non-voting ex officio representatives of the Department of Education, the Coordinating Commission for Postsecondary Education, the Department of Administrative Services, and the Nebraska Educational Telecommunications Commission.

Priorities

The Education Council will pursue activities that support efforts for:

- EC 1. Provision of an infrastructure that will permit all citizens of Nebraska to have access to the same educational experiences, regardless of location;
- EC 2. Identification and facilitation of diverse training opportunities;
- EC 3. Ensurance of life cycle funding;
- EC 4. Accommodation of learner needs;
- EC 5. Coordination of statewide education I.T. efforts and resources, including collaboration with public and private entities;
- EC 6. Pursuit of leading edge technology applications to enhance teaching and learning.

Council Priorities and Action Plans

State Government Council

Background

The Nebraska Information Resources Cabinet (IRC), created in January 1996 by Executive Order, was a predecessor to the current State Government Council. After it became a statutory body in 1998, the NITC established the State Government Council and gave it functions that had been assigned to the IRC. The State Government Council focuses on information technology issues that affect state government agencies.

Mission

The mission of the State Government Council is to provide direction and oversight for state government information technology vision, goals and policy.

Membership

The State Government Council has 19 members representing state agencies and 2 members chosen from the private sector, with experience in managing major information technology systems.

Priorities

The State Government Council will pursue activities that support efforts for:

- SGC 1. Implementing electronic government (e-government) to provide for a cost effective, efficient delivery of services while maintaining necessary security and confidentiality of non-public information;
- SGC 2. Improving collaboration and efficiency through technical standards, guidelines, and enterprise solutions;
- SGC 3. Providing a planning and implementation process for IT projects which avoids unnecessary delay and bureaucracy;
- SGC 4. Implementing appropriate policies for information technology related security and privacy.

Technical Panel

Background

The Technical Panel is a statutory body, which provides technical analysis and recommendations to the Commission. The Technical Panel is codified at Neb. Rev. Stat. § 86-1511.

Mission

The mission of the Technical Panel is to assist in the development of a statewide technical infrastructure that will be scalable, reliable, and efficient.

Membership

The Technical Panel consists of three members designated by statute and four other representatives specified by the Commission.

Priorities

The Technical Panel will pursue activities that:

- TP 1. Support the development of a robust statewide telecommunications infrastructure that is scalable, reliable and efficient;
- TP 2. Develop a technical architecture, including recommended standards and guidelines, to provide for interoperability and greater efficiency in IT systems;
- TP 3. Review technology projects or requests for funding recommended to the NITC, including budget requests, NITC grant requests, and Information Technology Infrastructure Fund projects.

Community Council Of the Nebraska Information Technology Commission

CC Priorities and Action Items for 2002-03

Priorities

The sector priorities of the Community Council of the Nebraska Information Technology Commission are to:

- CC 1. Develop leadership capacity in Nebraska's communities to address IT development.
- CC 2. Promote the development of an infrastructure (including sufficient bandwidth) that is secure, affordable, reliable, and responsive to the specific needs of various sectors. Efforts should be made to ensure that systems across the state are compatible.
- CC 3. Support the development of the intellectual infrastructure necessary for Information Age development. Intellectual infrastructure includes the development of a workforce knowledgeable of and fluent in the use and applications of information technology and the availability of IT support services.
- CC 4. Encourage the use of information technology to enhance community and economic development.
- CC 5. Foster awareness and collaborative and innovative uses of information technology by local governments to reduce costs, improve efficiency, and provide better customer service.

Action Items

Action Item CC 1

Title: Technologies Across Nebraska

Description: Work with the University of Nebraska and other Technologies Across Nebraska Partners to support the implementation of the Technologies Across Nebraska Action Plan, including the following action steps:

- Inventorying what activities TAN partners are planning regarding information technology development in the next year.
- Identifying gaps in the information and resources that are available to assist communities.
- Setting up regional support teams and regional meetings of IT committees.
- Developing and maintaining an e-mail discussion facilitate the exchange of information among resource providers and members of community IT committees.
- Piloting toolkit materials by working with at least 10 communities to develop community or regional IT plans.

Council Priorities and Action Plans

Lead: Technologies Across Nebraska and Community Council

Timeframe: June, 2002- May, 2003

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| Action Item CC 2 |
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Title: Telehealth Vision and Strategy

Description: Work with the NITC and other stakeholders to develop a vision and strategy for expanded use of telehealth.

Lead: Telehealth Subcommittee and NITC

Timeframe: June, 2002- December 2002

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| Action Item CC 3 |
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Title: Local Government Toolkit Resources

Description: Identifying and developing toolkit resources for local governments, including sample IT plans, sample inter-local agreements, best practices, and case studies.

Lead: Local Government and Libraries Subcommittee

Timeframe: January-May 2003

Education Council of the Nebraska Information Technology Commission

EC Priorities and Action Items for 2002-03

Priorities

The sector priorities of the Education Council of the Nebraska Information Technology Commission are to provide recommendations that support the:

- EC-1: Provision of an infrastructure that will permit all citizens of Nebraska to have access to the same educational experiences, regardless of location.
- EC-2: Identification and facilitation of diverse training opportunities;
- EC-3: Ensurance of life cycle funding;
- EC-4: Accommodation of learner needs;
- EC-5: Coordination of statewide education I.T. efforts and resources, including collaboration with public and private entities;
- EC-6: Pursuit of leading edge technology applications to enhance teaching and learning.

Action Items

PRIORITY EC-1

Provision of an infrastructure that will permit all citizens of Nebraska to have access to the same educational experiences, regardless of location.

EC 1.1 (Continuation)

Title: Statewide Video Standard

Description: The Education Council will assist the Nebraska Network Workgroup with a migration path and cost analysis of video standards implementation for distance learning and teleconferencing as they complete the study of a statewide video system.

Lead: Volunteer Task Group and Network Architecture Work Group.

Timeframe: 3rd Quarter, 2002 – 4th Quarter, 2002

EC 1.2 (Continuation)

Title: Adequate Rural Bandwidth

Description: The Education Council will assist the Nebraska Network Workgroup with network and backbone design considerations in preparation for an aggregated purchase of all publicly funded telecommunications. The Education Council will support strategies that ensure that adequate bandwidth is being provided to the rural areas of the State so as to provide access to the same educational experiences, regardless of location. The Education Council will emphasize the needs of the rural areas, including IP-centric applications, during NETCOM transport

Council Priorities and Action Plans

deployment and investigate application development that supports synchronous, asynchronous distance education as well as voice/video/data transfer.

Lead: Volunteer Task Group

Timeframe: 2nd Quarter, 2002 – 4th Quarter, 2002

PRIORITY EC-2

Identification and facilitation of diverse training opportunities;

EC 2.1 (New)

Title: Recommend Change in Funding for Technology Training Grants

Description: The Education Council, with the cooperation of the Training Advisory Work Group, will recommend a change in funding of the Technology Training Grants from the current Legislative level of \$130,000 to a new funding level of \$250,000 for Fiscal Year 2004-05, raising the grant maximum to \$25,000 and placing the grant fund under the jurisdiction of the NITC with Education Council input. This would enable the Technology Training Fund to function and be managed in a manner similar to the Community Technology Fund and Government Technology Collaboration Fund.

The NETC Training Grant fund, originated in 1994, has remained constant at \$130,000 with \$10,000 grant maximums for the last eight years. The mini-grants have been used by dozens of institutions to train hundreds of teachers and instructors in various areas of telecommunications and educational technology. Over the past eight years, the level of technology used by teachers, students and administrators to access the Internet and perform distance learning has increased many times. Since 1994, the cost of providing technology training has increased substantially, dwarfing the original training value of \$10,000. The Education Council sees this fund as vital to the ongoing improvement of Nebraska education by providing much-needed training funds for faculty all across the state in K-12 and Higher Education institutions.

Lead: Training Advisory Work Group

Timeframe: 3rd Quarter, 2002 – 2nd Quarter, 2003

PRIORITY EC-3

Ensurance of life cycle funding;

EC 3.1 (New)

Title: Life cycle funding strategies and Total Cost of Ownership materials

Description: The Education Council will assist K-12 and higher education institutions and funding agencies with specific life cycle funding strategies and provide them with Total Cost of Ownership materials in order to achieve the desired level of service.

Lead: Volunteer Task Group

Timeframe: 3rd Quarter, 2002--2nd Quarter, 2003

PRIORITY EC-4

Accommodation of learner needs;

EC 4.1(Revised)

Title: Role of Technology in Standards

Council Priorities and Action Plans

Description: The Education Council will recommend the appropriate role for technology, essential learnings, competencies, and proficiencies in statewide academic standards, certification and re-certification.

Lead: Training Advisory Work Group or Volunteer Task Group

Timeframe: 3rd Quarter, 2002 – ongoing

EC 4.2 (New)

Title: Educational Technology Proficiency Measures for Students, Teachers, and Administrators

Description: The Education Council will encourage the implementation of technology proficiency measures for students, teachers, and administrators across the State of Nebraska.

Lead: Volunteer Task Group

Timeframe: 3rd Quarter, 2002 – ongoing

PRIORITY EC-5

Coordination of statewide education I.T. efforts and resources, including collaboration with public and private entities;

No additional activity was identified for this priority in this performance year.

PRIORITY EC-6

Pursuit of leading edge technology applications to enhance teaching and learning.

EC 6.1(Revised)

Title: Synchronous and Asynchronous Instructional Methods

Description: The Education Council will encourage the development of new instructional methods and resources for synchronous and asynchronous instruction and guidelines for their appropriate use.

Lead: Training Advisory Work Group or Appointed Task Group

Timeframe: 2nd Quarter, 2002 – 2nd Quarter, 2003

The current slate of action items was discussed and recommended by the Education Council on May 17, 2002 and will be considered by the NITC on June 18, 2002 for insertion into "Section 2 – Council Priorities and Action Items" of the Statewide Technology Plan.

**State Government Council
Of the
Nebraska Information Technology Commission
SGC Priorities and Action Items for 2002-2003**

Priorities

The sector priorities of the State Government Council of the Nebraska Information Technology Commission are to provide recommendations that support:

- SGC-1 Implementing e-government to provide for a cost effective, efficient delivery of services while maintaining necessary security and confidentiality of non-public information.
- SGC-2 Improving collaboration and efficiency through technical standards, guidelines, and enterprise solutions.
- SGC-3 Provide a planning and implementation process for IT projects which avoids unnecessary delay and bureaucracy.
- SGC-4 Implementing appropriate policies for information technology related security and privacy.

Action Items

PRIORITY SGC-1

Implementing e-government to provide for a cost effective, efficient delivery of services while maintaining necessary security and confidentiality of non-public information.

SGC 1.1

Title: E-Government to Business Initiative

Description: The NITC adopted the e-government strategic plan in November 2000. Governor Johanns endorsed the strategic plan and directed that an initial focus be placed on the interaction between government and businesses. The Business Portal Action Plan was developed to guide that effort. This action item will involve the continued implementation of that plan. (A copy is available at: <http://www.nitc.state.ne.us/sgc/> and includes a complete list of short and long term action items.)

Lead: Office of the CIO

Timeframe:

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|----------------------------|--|
| Completed | Phase I: Creating a portal and inventory of business forms. |
| Beginning 2nd Quarter 2002 | Phase II: Includes training sessions for development professionals and businesses in using the business portal; implementation of a maintenance plan for keeping the portal's business forms inventory current and accurate; and continuation of an aggressive strategy to automate government forms used by businesses. |

Council Priorities and Action Plans

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| Future | Complete remaining items in the Business Portal Action Plan, including increased integration across agencies and levels of government. |
|--------|--|

SGC 1.2**Title: E-Government to Employee Initiative**

Description: Develop and implement an action plan to provide an employee portal for state government employees. The portal will provide access to employee related information and services such as: the NIS system; state directory; pay stub application; TSB vehicle reservation system; retirement accounts; IMServices Help Desk; and newsletters (Statehouse Observer, Affirmative Action Newsletter, etc.).

Lead: Work group to be created

Timeframe: Beginning 3rd Quarter 2002

SGC 1.3**Title: E-Government to Citizens Initiative**

Description: Building on the Business Portal, develop and implement an action plan to provide an enhanced portal for citizens. The portal should provide easier access to existing information and services; as well as, provide new e-government services.

Lead: Work group to be created

Timeframe: Beginning 4th Quarter 2002

PRIORITY SGC-2

Improving collaboration and efficiency through technical standards, guidelines, and enterprise solutions.

ACTION ITEM SGC 2.1**Title: Recommend technical standards, guidelines, and enterprise solutions**

Description: The SGC will recommend technical standards, guidelines, and enterprise solutions for state government. The SGC will work with the Technical Panel to develop these standards and guidelines.

Lead: Work group(s) to be created.

Timeframe:

| | |
|-----------------------------|---|
| July 2002 through July 2003 | Recommend technical standards, guidelines, or enterprise solutions for: - E-mail Standard (revise) - Secure E-mail Standard (see SGC 4.1) - E-fax - Content Management - Document Management and Records Retention (see SGC 4.2) - Server Farm - Electronic Forms Automation |
| Ongoing | Others as identified |

PRIORITY SGC-3

Provide a planning and implementation process for IT projects which avoids unnecessary delay and bureaucracy.

SGC 3.1**Title: Improved Planning Process**

Description: Continue to improve the information technology planning process for state agencies. The SGC will review, and revise as appropriate, the planning documents utilized by agencies, including: agency comprehensive information technology plans and agency project proposal forms for budget requests. The review will include recommendations for improving the cost-benefit analysis information provided with project proposals.

Lead: Office of the CIO

Timeframe: 2nd Quarter 2003 - Review and revise planning documents as needed.

SGC 3.2**Title: Improved Project Management**

Description: The SGC will continue to provide guidance to agencies on best practices for project management. Areas of focus should include: management of IT related projects; measuring results; preparing project closure reports; and recommendations for a certification process for project managers.

Lead: Office of the CIO

Timeframe: 2nd Quarter 2003 - Review and revise project management documents as needed.

SGC 3.3**Title: Communication with Policymakers**

Description: Improve communications with policymakers in both the Legislative and Executive branches. This action will include providing briefings to the chairs of the NITC oversight committees (Appropriations Committee and Transportation and Telecommunications Committee) on issues raised by the State Government Council.

Lead: Office of the CIO

Timeframe: Ongoing

PRIORITY SGC-4

Implementing appropriate policies for information technology related security and privacy.

SGC 4.1**Title: Security Policies**

Description: In January 2001, the NITC adopted the security policies developed by the Technical Panel's Security Architecture Work Group. These policies, guidelines, and best practices are intended to provide a framework for a secure computing environment, with a focus on state government. The SGC, in coordination with the Technical Panel, will work to implement these policies in state government. Areas to be addressed include: training; agency level planning; business continuity planning; and security assessments.

Lead: To be determined

Timeframe:

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|--------------------------------|---|
| July 2002 through July 2003 | - Secure e-mail standard to be recommended - Review and make recommendations for |
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Council Priorities and Action Plans

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| | "authentication" standards, guidelines, or best practices |
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SGC 4.2**Title: Records Retention Project**

Description: Working with the Records Management Division, develop technical solutions for records retention.

Lead: To be determined

Timeframe: 3rd and 4th Quarters 2002

**Technical Panel
Of the
Nebraska Information Technology Commission**

Technical Panel Priorities and Action Items for 2002-2003

Priorities

- TP-1 Support the development of a robust statewide telecommunications infrastructure that is scalable, reliable and efficient.
- TP-2 Develop a technical architecture, including recommended standards and guidelines, to provide for interoperability and greater efficiency in IT systems.
- TP-3 Review technology projects or requests for funding recommended to the NITC, including budget requests, NITC grant requests, and Information Technology Infrastructure Fund projects.

Action Items

PRIORITY TP-1

Support the development of a robust statewide telecommunications infrastructure that is scalable, reliable and efficient.

TP 1.1

Title: Provide Technical Support to the NETCOM Project.

Description: The panel will provide technical support for the implementation of the NETCOM Project.

Lead: Brenda Decker, Network Architecture Work Group

Timeframe: NETCOM - Ongoing

TP 1.2

Title: Nebraska Telecommunications Infrastructure Security Review

Description: Working with the state Homeland Security team, examine security issues regarding the state's telecommunications infrastructure.

Lead: Steve Schafer

Timeframe: Ongoing

TP 1.3

Title: Identify Types and Levels of Service

Description: The panel will identify types and levels of telecommunication services that different sectors (including business, health care, and education) require. In cooperation with the Public Service Commission and service providers, the panel will investigate ways to document the availability of different telecommunication services by geographic area.

Lead: Brenda Decker

Timeframe: Ongoing

Council Priorities and Action Plans

PRIORITY TP-2

Develop a technical architecture, including recommended standards and guidelines, to provide for interoperability and greater efficiency in IT systems.

TP 2.1

Title: Recommend Technical Standards, Guidelines, and Best Practices

Description: The panel, with input from the NITC councils and other coordinating entities, will recommend the adoption of technical standards, guidelines, and best practices.

Lead: To be determined.

Timeframe: To be determined.

TP 2.2

Title: Technical Support for Aggregation and Coordination of Networks

Description: The panel will provide technical support for the aggregation and coordination of networks, including the Nebraska Network Workgroup. The panel will also create an application implementation workgroup to further this action item.

Lead: Steve Schafer

Timeframe: Ongoing

TP 2.3

Title: Implementation of Critical Elements of the Technical Architecture

Description: The panel will identify "critical elements" of the technical architecture and recommend an enterprise approach for implementation of each.

Lead: Walter Weir

Timeframe: 3rd Quarter 2002 - 2nd Quarter 2003

PRIORITY TP-3

Review technology projects or requests for funding recommended to the NITC, including budget requests, NITC grant requests, and Information Technology Infrastructure Fund projects.

TP 3.1

Title: Project Reviews - Statutory

Description: Provide a technical review of project proposals as required by statute. Categories of projects that must be reviewed by the panel are: budget requests; GTCF grant fund applications; CTF grant fund applications; and ITIF funded projects. Certain long-term projects, such as NIS and NETCOM, are also reviewed periodically during the project implementation.

Lead: Rick Becker

Timeframe: Budget requests: September - November 2002
 GTCF and CTF grants: As received
 ITIF funded projects: Prior to authorization of use of funds
 Long-term projects: Ongoing
 Education Innovation Fund Grants: Annual

TP 3.2

Title: Project Reviews - Other

Council Priorities and Action Plans

Description: The panel will review projects not listed in 3.1 above at the request of the NITC, the project sponsor, or other responsible party.

Lead: Rick Becker

Timeframe: State Records Board grants: Quarterly
Voluntary reviews: As requested

TP 3.3

Title: Revise Procedures for Reviewing IT Projects and Purchases by State Agencies

Description: The panel will recommend revisions to the technical review procedures for IT related projects and purchases by state agencies. The purpose of the review process is to ensure compliance with technical standards, compatibility with existing or planned infrastructure, and sound decisions. The revised review process will be designed with the following considerations: 1) the process will incorporate all existing review procedures (e.g. the DAS 1909 form) to provide agencies with a one-step process; 2) the process for submitting requests will not be cumbersome; and 3) the review process will allow for a rapid response to the requesting agency.

Lead: DAS IT Sub-cabinet

Timeframe: 3rd Quarter 2002

Section 3

Technical Infrastructure

Section 3

Technical Infrastructure

Overview

State statute directs the NITC to undertake several steps to coordinate and improve the state's technical infrastructure. According to Sections 86-1501 through 86-1514, the NITC must accomplish the following tasks:

- Develop a statewide vision and strategic plan to guide investments in information technology;
- Improve the planning, budgeting, and management of state government's information resources;
- Support the development of a unified statewide telecommunications infrastructure that is scalable, reliable, and efficient; and
- Organize technology planning in new ways to aggregate demand, reduce costs, and create support networks.

The NITC uses four approaches to coordinate and develop the state's technical infrastructure. Through the work of the Technical Panel, the NITC is defining a **technical architecture**. The technical architecture guides decisions about hardware, software, and networks in order to achieve interoperability, data sharing, flexible systems, and control costs. Where necessary, the NITC adopts **standards and guidelines** pertaining to specific aspects of the technical architecture. The process for developing standards and guidelines emphasizes communication and broad participation. Pursuant to state statute, the NITC conducts **technical reviews** of selected projects. Finally, the NITC undertakes **special projects** to achieve its goals.

This section of the Statewide Technology Plan lays the foundation for all NITC-sponsored activity pertaining to the state's technical infrastructure. Detailed information about the state's technical architecture and standards and guidelines is available on the NITC web site at: <http://www.nitc.state.ne.us/standards/index.html>.

The NITC web site (<http://www.nitc.state.ne.us/>) also has more information about special projects that are underway.

Technical Architecture

Purpose and Goals

An “enterprise architecture framework” refers to a conceptual structure for guiding decisions on the exchange of information and utilization of shared information technology resources. The framework includes, but is not limited to networks, computer platforms, applications, and enterprise-specific data. The business case for developing this architecture rests on six goals for information systems:

- **Provide access to data in a useful format when and where it is needed;**
- **Insure accurate and consistent data;**
- **Share data across the organization;**
- **Improve ability to adapt to changing business needs;**
- **Provide security; and**
- **Contain costs.**

Objectives

The objectives of this undertaking are to:

- Establish guidelines and standards for the use of information technology in the State of Nebraska, when standards are needed to support statewide activities, including but not limited to accessibility, communications networks, e-government, and security.;
- Assist communities of interest in developing standards that are necessary to integrate data and applications across jurisdictions;
- Develop guidelines that enhance information technology investment and purchasing activities.

General Principles

The Technical Panel and NITC shall observe the following principles when recommending and adopting standards and guidelines for a state enterprise architecture framework. The architecture should:

- Facilitate the goals and objectives of the Statewide Technology Plan (Section 1);
- Support the use of information technology to improve efficiency and effectiveness of all sectors;
- Increase access to information and services for citizens, business, and government, and all sectors, while protecting privacy and security considerations;
- Enable affected entities to leverage existing technology infrastructure investment;
- Use advances in technology that are scalable, reliable and cost-effective; and
- Provide for identification or creation of clear lines of authority and responsibility for all processes and technical decisions.

Affected agencies should be allowed reasonable access to the process of developing standards and guidelines. Affected agencies should have a reasonable time to implement applicable standards and guidelines.

The NITC, in concert with affected entities, will weigh the benefits of a standard or guideline against the cost of implementation.

Development

The Technical Panel of the NITC will undertake a periodic review of the current architecture. The review will identify problems as well as strengths. In cooperation with the Councils of the NITC, the Technical Panel will identify the important business drivers that will determine the adequacy of the architecture in the future. The Technical Panel may sponsor studies of specific components and issues pertaining to the architecture. Based on this information, the Technical Panel will develop a state enterprise architecture framework which:

- Categorizes the architecture into useful components;
- Defines the scope of each component;

Technical Infrastructure

- Establishes principles to guide the development of each component of the architecture.

The Technical Panel shall recommend technical standards and guidelines to assist implementation of the architecture. The Technical Panel shall recommend policies and strategies to support the transition from the current to the target architecture.

The architecture framework should reflect the unique requirements of different sectors of the state. Preparing the framework should reflect a collaborative effort. A state enterprise architecture framework should not impede the rapid deployment of appropriate technology or establish cumbersome regulations or bureaucracy.

Given the complexity, scope, and changing nature of technology at the statewide level, developing the state enterprise architecture framework must follow an incremental approach that focuses on functional groups with shared interests. The framework should address the goals of access, accuracy, adaptability, cost containment, data sharing and security.

Defining the Scope of the Enterprise

Since information sharing is a fundamental purpose of enterprise architecture, the term “enterprise” should include all areas that need to share **substantial** amounts of information. (Steven Spewak, 1995) A scope that is too narrow will miss important details and fall short of achieving the goals of the enterprise architecture. A scope that is too broad will take too much time to develop and will become unmanageable.

To be successful, enterprise architecture must incorporate policy, control, implementation, and management functions. (NASCIO Enterprise Architecture Toolkit, v.1.0, 2001)

Defining the enterprise architecture is a significant challenge for the NITC, because the potential scope includes state agencies, local government, K-12 education, higher education, and even other entities. This is far too broad to be successful, except for limited areas. In addition, the NITC can only set policy. Control, implementation, and management are other essential components of a complete governance model for enterprise architecture. These are outside the authority of the NITC.

Technical Infrastructure

Solving this dilemma requires a hybrid approach to enterprise architecture. The solution includes the following elements:

1. NITC guidelines should encourage enterprise architectures for organizational units, such as state government, local government entities, and higher educational institutions. The guidelines should consider a common approach and templates, such as those under development by the National Association of Chief Information Officers (NASCIO). The enterprise architecture of each organizational unit should explicitly address data sharing requirements and interoperability with statewide systems.
2. The NITC should encourage communities of interest to develop standards and guidelines that will promote data sharing and insure interoperability. Examples of communities of interest include the Nebraska Geographic Information Systems Steering Committee, the Nebraska Criminal Justice Information Systems Advisory Committee, and distance education networks. The NITC Technical Panel should help organize, review and coordinate these efforts.
3. The NITC Technical Panel will develop elements of the enterprise architecture, including standards and guidelines, on topics that transcend organizational units or individual communities of interest. Examples include accessibility requirements and security policies and procedures. The Technical Panel will investigate tools for better data management and data sharing.
4. The NITC Technical Panel will recommend procedures for evaluating major investments in the technical infrastructure. The procedures should address the business case, life cycle cost analysis, alternatives, compatibility with other elements of the technical architecture, and risk assessment.
5. The NITC should provide a clearinghouse to document the technical architecture, including standards and guidelines.

Process for preparing, reviewing, and updating standards and guidelines

Authority

"The Commission shall: ... adopt minimum technical standards, guidelines, and architectures upon recommendation by the technical panel ..." Neb. Rev. Stat. Section 86-1506(6)

"... The technical panel may recommend technical standards and guidelines to be considered for adoption by the Commission." Neb Rev. Stat. Section 86-1511(2)

Definitions

Standard: A degree or level of requirement that all jurisdictions should use, which would be enforceable by duly authorized entities. With any standard, there will be circumstances that merit exceptions.

Guideline: A statement of general policy or procedure by which to determine a course of action, subject to reasonable situations. Adherence is voluntary.

Overview

Adhering to a sound set of standards for information technology can reduce costs and improve service delivery. Statute requires the Technical Panel to recommend standards and guidelines to the NITC for adoption. Enforcement of NITC standards and guidelines depends entirely upon cooperation of other entities with such authority.

These procedures permit both the NITC Technical Panel and users to propose standards and guidelines. By statute, the Technical Panel may recommend technical standards and guidelines to the NITC. In addition, any state agency, political subdivision, educational institution, or other information systems user in Nebraska may propose standards or guidelines for information technology. The technical panel will review the proposal and then invite comments from other information technology coordinating bodies, other government agencies, and the public.

Principles

The Technical Panel and NITC shall observe the following principles when recommending and adopting standards and guidelines:

- Data are shared, consistent with security and confidentiality requirements.
- The infrastructure uses advances in technology that are scalable, reliable and cost-effective.
- Design and development of the statewide infrastructure are collaborative.
- The telecommunications infrastructure is based upon open-systems concepts to assure universal access and interoperability.
- Affected entities should have a reasonable time to implement a standard or guideline.
- The NITC should weigh the benefits of a standard or guideline against the cost of implementation.

Format

The format of a standard or guideline shall include the sections listed below. Eventually, a form will be available for this purpose to facilitate the process of proposing and reviewing standards and guidelines.

1. Title and number
2. Date of first adoption
3. Date of last revision
4. Date of scheduled review
5. Status (draft, pending, active, inactive, standard or guideline)
6. Applicability (who it pertains to)
7. Category
8. Description of impact
9. Related Standards
10. Rationale and justification
11. Primary NITC principle addressed

Process

The Technical Panel will solicit initial standards and guidelines from NITC Councils, other coordinating entities, and state and local agencies. The invitation will include a timeframe for receiving notices and making recommendations to the NITC. After the initial round of standards and guidelines, a sponsor may propose a standard or guideline to the Technical Panel for consideration. Proposals should be e-mailed. Sponsors should describe the standard, its applicability, impact, related standards, and provide other justification.

The Technical Panel will review the proposed standard or guideline and determine whether to proceed with further consideration. The Technical Panel may request further information from the sponsor or make changes to the proposal. The Technical Panel will announce and post the proposed guidance on the World Wide Web for review by affected entities for at least 30 days. Comments should be submitted by e-mail to info@cio.state.ne.us. The Technical Panel may appoint special review committees to examine the proposal and make recommendations.

The Technical Panel will review the proposal and any comments received. The review will include an evaluation of the proposal's alignment with the NITC Statewide Technology Plan.

The Technical Panel may make further changes or recommend the proposal to the NITC for adoption. If changes are substantive, in nature, the Technical Panel shall provide another 30-day opportunity for comment.

The NITC may adopt, change, or reject any proposed standard or guideline.

Technical Review Process

Section 86-1511 (2) requires the Technical Panel to "... review any technology project or request for additional funding recommended to the Nebraska Information Technology Commission...." Sections 86-1512 and 86-1513 require the Technical Panel to review requests for funds from the Community Technology Fund and the Government Technology Collaboration Fund. Section 9-812 requires the Technical Panel to review funding requests for educational technology assistance grants (lottery funds). In addition, the Technical Panel will conduct special reviews on request by project sponsors, the Governor, the Legislature, or other entities exercising oversight responsibilities.

The review process will evaluate and rank the adequacy of each component of the project plan. The Technical Panel will identify issues pertaining to implementation, technical impact, and risk assessment. The Technical Panel will look for duplication, opportunities for collaboration and compatibility with other systems.

It is neither practical nor necessary for the Technical Panel to review all information technology projects that an agency or other jurisdiction undertakes. One purpose of the review process is to assist the budget process in reviewing and ranking appropriation requests. Statute requires the Technical Panel to review requests for "new or additional funding." The NITC has issued instructions to guide agencies on what constitutes "new or additional funding." The guidance document is available on the NITC web site at: <http://www.nitc.state.ne.us/forms/>.

Another purpose of the review process is to promote consistency with the Statewide Technology Plan. Other than reviews mandated by statute, the NITC and Technical Panel must rely on agencies and other jurisdictions to identify and submit for review any projects that would have either a significant positive or negative impact on the Statewide Technology Plan.

The review process can also provide technical assistance and advice to project sponsors. Agencies and other jurisdictions may submit any project to the Technical Panel for review.

Special Projects

The NITC has sponsored two planning efforts that target the need for a “unified statewide telecommunications infrastructure that is scalable, reliable and efficient.” In 1998, the NITC recommended a study that would document the current and future telecommunications demand of public entities. The “Telecommunications Infrastructure Needs Assessment” (TINA) got underway in August 1999. It included interviews with almost 250 individuals, an inventory that was sent to over 400 entities, and 3 focus groups with 125 participants. The TINA study identified several objectives, including:

- Providing an information infrastructure to support governmental educational and economic development initiatives throughout the state;
- Leveraging the State’s purchasing power to create economic development incentives; and
- Reducing telecommunications costs of state government;

The TINA study resulted in an RFP in August 2001, which sought a qualified entity to assume the position of “prime contractor” for implementation of a statewide telecommunications network. On October 19, 2001, the State rejected all proposals because they failed to meet key objectives. In February 2002, the NITC passed a resolution, which endorsed conducting a pilot project as a proof of concept. Further information about the TINA study and related activities is available at:

<http://www.doc.state.ne.us/netcom/index.html>.

Another special project is the Nebraska Network Feasibility Study. At its February 2002 meeting, the NITC formed a workgroup to evaluate the feasibility of developing a digital network and related support functions that would serve education, communities, and state government. The workgroup will present a final report and recommendations to the NITC by September 2002. Further information is available at:

<http://www.nitc.state.ne.us/nitc/network/>.

Section 4

Planning and Project Management

Section 4**Planning and Project Management****Overview of Planning and Project Management Requirements**

Information is a critical resource in government and many private sector activities. Virtually every government agency and many businesses spend substantial time and resources collecting, distributing, analyzing, transforming, and using information. In the past, manual procedures provided the only means for manipulating information. Today, automation and information technology represent powerful tools for maximizing the value of information. As a major resource and asset, information technology requires effective planning and management. In this respect, information technology has much in common with other types of assets, such as human resources, capital facilities, and financial resources. All require some degree of formal structure to promote effective use and management.

The NITC vision statement speaks to using information technology "to improve the quality of life of all Nebraskans." This vision, the NITC goals, and priorities of the NITC Councils and Technical Panel provide the context for the planning process. In addition, good planning and management should help to achieve certain principles for information technology. These include:

- Information technology must serve and respond to the mission, goals, and priorities of the sponsoring entity.
- Assessing and possibly redesigning the business process must precede decisions about applying a specific information technology solution.
- The planning and management process should treat information as a strategic resource that has value and should explore ways to maximize this value.
- Information belongs to the enterprise, and sponsoring entities should incorporate data sharing and the needs of other users in their plans, subject to privacy and confidentiality requirements.
- Information technology systems should be scalable, reliable, and efficient.

Section 86-1506 (5) directs the NITC to adopt guidelines regarding project planning and management. Section 86-1510 (5) requires the Chief Information Officer to "implement a strategic, tactical, and project planning process for non-education state government information technology that is linked to the budget process." Section 86-1510 (9) requires the Chief Information Officer to "monitor the status of major non-education state government technology projects." These planning and project management requirements apply to any "governmental entities, state agencies, and political subdivisions, which directly utilize state-appropriated funds for information technology purposes."

Section 86-1511 requires the Technical Panel to "review any technology project or request for additional funding recommended to the Nebraska Information Technology Commission." Section 86-1506 (8) requires the NITC to "... make recommendations to the Governor and Legislature, including a prioritized list of projects, reviewed by the technical panel, for which new or additional funding is requested."

This section of the Statewide Technology Plan presents procedures for the following activities:

- Agency Comprehensive Information Technology Plan
- Information Technology Budget Requests
- Information Technology Project Proposals
- Technical Review Process
- NITC Recommendations and Prioritization
- Information Technology Project Management and Implementation

Agency Comprehensive Information Technology Plans

Comprehensive information technology plans should document how an organization's use of information technology supports its goals, objectives and functions. The plans provide a baseline view of current systems and provide strategic direction for future investments in information technology. The level of detail should be sufficient to assist high-level decisions, but does not substitute for specific project plans used for budgeting. As public documents, comprehensive technology plans serve as a means for communicating with other agencies and organizations that may be affected.

The comprehensive technology plans serve the following purposes:

- Assist decision-making at the organizational and statewide levels;
- Create a structured planning process for information technology;
- Integrate agency information technology planning with the state's biennial budget process;
- Catalog the state's information technology assets;
- Provide a clearinghouse of plans to encourage sharing of best planning practices; and
- Promote compatibility between an organization's strategic direction for information technology and the NITC's Statewide Technology Plan.

Required

All state agencies and public higher education institutions requesting state appropriations for information technology should prepare a comprehensive information technology plan.

Recommended

Political subdivisions and major public service organizations should prepare a comprehensive technology plan to guide internal decisions and to encourage collaboration with other organizations.

Procedures for Submission

Agency Comprehensive Information Technology Plans are due by April 1 of even-numbered years.

The Comprehensive Information Technology Plan form is available on the NITC Web site (<http://www.nitc.state.ne.us/forms/>). Any agency that does not have Internet access can obtain copies of the form by contacting the Office of the CIO at:

Office of the CIO
521 South 14th Street, Suite 200
Lincoln, Nebraska 68508
(402) 471-3560

The plan should be submitted in one of the following ways:

- The preferred method for submitting the plan is through the use of the submitting agency's Web site. If possible, the submitting agency should post their Comprehensive Information Technology Plan to their agency's Web site. The agency should then provide the Office of the CIO with the URL, which corresponds to the plan by sending e-mail with the relevant information to info@cio.state.ne.us.
- The plan may also be submitted as an e-mail attachment to info@cio.state.ne.us. The e-mail message should include the name of the submitting agency and contact information for the individual submitting the documents.
- Completed forms may also be provided to the Office of the CIO on a standard 3.5" diskette or CD-ROM.
- If an agency is unable to submit files in any of the methods above, contact the Office of the CIO to make other arrangements.

Review of Plans

NITC staff will review the technology plans of state agencies and public higher education institutions for completeness and to prepare summaries for the NITC and its councils. The Technical Panel may review comprehensive technology plans on a selective basis. NITC staff will forward any comments to the submitting agency or institution.

Relationship to the Budget Request

The comprehensive technology plan provides part of the context for evaluating an agency's budget request for information technology. The comprehensive information technology plan is not subject to NITC approval, although staff and the Technical Panel will review the plans and offer comments and suggestions.

Agency Information Technology Budget Requests

State agencies must submit information relating to expenditures and funding requests relating to information technology as part of the biennial budget request cycle and interim budget requests. Specific directions are included with the State of Nebraska Budget Instructions. Major aspects of the budget request for information technology include:

- Personnel who provide or support information technology
- On-going operational costs
- One-time project costs
- Narrative justification, including life-cycle costs and performance indicators

The budget request document will no longer include narrative information that belongs in the agency's comprehensive information technology plan or project plans. Instead, the budget request will focus on linking information technology costs to different programs and other categories. Performance indicators will enable policy makers to establish a better understanding of the value of technology to each agency's mission and goals.

Required

All state agencies and public higher education institutions requesting state appropriations for information technology must submit budget request data for information technology expenditures as part of the state's budget request process.

Recommended

Political subdivisions and major public service organizations should adopt budget procedures for information technology that serve the needs of their respective governing entities.

Procedures for Submission

The State Budget Division will provide an automated system for preparing information technology budget requests. NITC staff

will prepare summaries of information technology expenditures and requests for the NITC and the NITC Councils. NITC staff will assist the State Budget Division and Legislative Fiscal Office with reviewing information technology expenditures and requests.

Agency Information Technology Project Proposals

Project proposals provide detailed information about the purpose, scope, justification, and implementation of new projects and major changes to existing systems. Agencies should prepare a project proposal for all projects requiring new or additional funding. The degree of detail in each plan should correspond to the magnitude of the project. Major components of each project proposal are listed below:

- General Information
- Executive Summary
- Goals and Objectives
- Scope and Projected Outcomes
- Project Justification / Business Case
- Implementation
- Technical Impact
- Risk Assessment
- Financial Analysis and Budget

Required

All state agencies and public higher education institutions requesting state appropriations for information technology must prepare a project proposal for each information technology project. An information technology project is defined as a specific series of activities involving the implementation of new or enhanced IT systems for the sponsoring agency. A project proposal is required whenever new or additional state appropriations (regardless of fund type) are required for implementation. Project proposals should also be prepared for requests for funding from the Community Technology Fund, the Government Technology Collaboration Fund, Education Technology Assistance Grants, and the School Technology Fund.

Procedures for Submission

State agencies and public higher education institutions must submit their information technology project proposals to the NITC at the same time that biennial budget request documents are due.

The Project Proposal Form and Assessment Document can be found on the NITC Web site (<http://www.nitc.state.ne.us/forms/>). Any agency that does not have Internet access can obtain copies of the templates and forms by contacting the Office of the CIO at:

Office of the CIO
521 South 14th Street, Suite 200
Lincoln, Nebraska 68508
(402) 471-3560

Project proposal forms should be submitted in one of the following ways:

- The preferred method for submitting the project proposal forms is through the use of the submitting agency's Web site. If possible, the submitting agency should post their project proposal forms to their agency's Web site. The agency should then provide the Office of the CIO with the URL, which corresponds to the forms by sending e-mail with the relevant information to info@cio.state.ne.us.
- The forms may also be submitted as an e-mail attachment to info@cio.state.ne.us. The e-mail message should include the name of the submitting agency and contact information for the individual submitting the documents.
- Completed forms may also be provided to the Office of the CIO on a standard 3.5" diskette or CD-ROM.
- If an agency is unable to submit files in any of the methods above, contact the Office of the CIO to make other arrangements.

Review of Project Proposal Forms

NITC staff will review project proposals for completeness and to prepare summaries for the NITC, the Technical Panel, and the NITC councils. NITC staff will assist the NITC and its councils with the review and prioritization process set forth below. NITC staff will forward any comments to the sponsoring agency or institution.

The NITC Technical Panel will conduct a formal review of projects that fall into one or more of the following categories:

- New or additional state funding (appropriation request)

- Community Technology Fund and Government Technology Collaboration Fund
- Education Technology Assistance Grants or School Technology Fund
- Special requests by the sponsoring agency, governing board, the Governor, Legislature, or the NITC

Technical Review Process

Section 86-1511 (2) requires the Technical Panel to "... review any technology project or request for additional funding recommended to the Nebraska Information Technology Commission...." Sections 86-1512 and 86-1513 require the Technical Panel to review requests for funds from the Community Technology Fund and the Government Technology Collaboration Fund. Section 9-812 requires the Technical Panel to review funding requests for educational technology assistance grants (lottery funds). In addition, the Technical Panel will conduct special reviews on request by project sponsors, the Governor, the Legislature, or other entities exercising oversight responsibilities.

The review process will evaluate and rank the adequacy of each component of the project plan. The Technical Panel will identify issues pertaining to implementation, technical impact, and risk assessment. The Technical Panel will look for duplication, opportunities for collaboration and compatibility with other systems.

It is neither practical nor necessary for the Technical Panel to review all information technology projects that an agency or other jurisdiction undertakes. One purpose of the review process is to assist the budget process in reviewing and ranking appropriation requests. Statute requires the Technical Panel to review requests for "additional funding." Given the undefined meaning of this term, the NITC and Technical Panel will rely on the State Budget Division and Legislative Fiscal Office for assistance in determining what information technology projects represent "additional funding."

Another purpose of the review process is to promote consistency with the Statewide Technology Plan. Other than reviews mandated by statute, the NITC and Technical Panel must rely on agencies and other jurisdictions to identify and submit for review any projects that would have either a significant positive or negative impact on the Statewide Technology Plan.

The review process can also provide technical assistance and advice to project sponsors. Agencies and other jurisdictions may submit any project to the Technical Panel for review.

NITC Recommendations and Prioritization

Section 86-1506 requires the NITC to "... make recommendations to the Governor and Legislature, including a prioritized list of projects, reviewed by the technical panel, for which new or additional funding is requested." The NITC will use a three-step process in evaluating information technology projects and assigning each a unique priority ranking. The process will rely on information provided in the agency information technology project proposals described above.

Technical Panel review and recommendations

Using an assessment tool, the Technical Panel will score the technical aspects of the project proposals, including the sections on implementation, technical impact, financial analysis, and risk assessment. Although the Technical Panel must have information about all aspects of a proposed project, the panel's review will focus on questions impacting the potential success of the project rather than its programmatic merit or justification.

Council reviews and recommendations

The NITC councils will evaluate the objectives and justification for each project. Based on these evaluations and the technical assessment, each council will prepare a prioritized list of recommended projects for its sector.

NITC prioritization

The NITC will prepare a combined list of prioritized projects.

The assessment document used to score project proposals can be found on the NITC Web site (<http://www.nitc.state.ne.us/forms/>).

Project Management Guidelines

Overview

Section 86-1506 (5) directs the NITC to adopt guidelines regarding project planning and management. The goal of project management is to achieve the objectives of the project on time and within budget. Project management should define the responsibilities of project sponsors, and provide for adequate monitoring and reporting to the appropriate managers of the sponsoring entity and policy makers. It should allow a means to document benefits, monitor the scope and completion of projects, and compare costs.

The size and complexity of a project will determine the approach and structure required for good project management. Small projects may require only informal procedures. Large projects may require professional project managers and a formalized project management methodology.

Project management is essential for projects that present unusual or high risks. These risks may include:

- Technical (such as new technologies to the state or the sponsoring entity),
- Work processes (such as new functions or different ways of performing functions),
- Organizational (such as dealing with multiple organizational entities),
- Legal, contractual, regulatory, or
- Other (such as system size, funding limitations, project duration, timetable flexibility, technical or business complexity, implementation challenges, importance to the operation of the organization, or interrelations with other systems).

The NITC intends to develop standards and guidelines regarding project planning and management that are supported by the Project Management Institute (PMI) through the Project Management Body of Knowledge (PMBOK). PMI is the leading nonprofit professional association in the area of project management. PMI establishes project management standards and

provides seminars, educational programs and professional certification to the project management profession. The PMBOK is an inclusive term that describes the sum of knowledge within the profession of project management.

The PMBOK describes a project as a temporary endeavor undertaken to create a unique product or service. Types of information technology projects may include feasibility studies, research efforts, information technology strategic or other planning initiatives, system implementation, or development projects.

These general procedures for project management and implementation include three components:

- Project charter (to summarize expectations and responsibilities)
- Project implementation plan (to provide the detailed analyses that guide the project from beginning to conclusion)
- Project tracking and reporting (to communicate the progress of the project compared to expectations)

Applicability

All state agencies and public higher education institutions using state appropriations for information technology should adopt project management and implementation procedures, such as those presented in this guideline. All political subdivisions and major public service organizations should adopt similar policies to guide project management and implementation.

State-funded entities should follow these or similar project management guidelines for major projects and projects that have statewide strategic importance.

A "major project" includes projects that would have a significant effect on a core business function of the sponsoring organization. In addition, any project that would incur total cumulative expenditures of \$250,000 or more should be considered a major project.

A "statewide strategic project" affects multiple government programs or departments. These projects may involve interfaces with other applications, provide data to or receive information

from other applications or government programs or organizations. Statewide strategic projects may impact state and local governments, private industry, citizens, or state employees beyond the sponsoring agency within a department or beyond the responsible department. Statewide strategic projects impact the state and its citizens from an enterprise perspective that is broader than the sponsoring organization.

Instructions

Project Charter

The project charter is the primary document that sets expectations for the project among the stakeholders. The responsible manager within the sponsoring entity should commit to the completion of the project within the parameters of the project charter. The charter will set forth the project scope, schedule, budget, and benefits. The project charter also:

- Identifies the project sponsor, project manager, and responsibility for project success;
- Sets baselines to assess progress;
- Documents assumptions which must hold true for the project to satisfy expectations; and
- Provides a means to modify project expectations and deliverables, if changes occur.

The contents of the project charter should include:

- **Project Description.** Include a brief description of the purpose of the project in non-technical terms.
- **Project Scope and Objectives.** Include one or two paragraphs defining the project scope and objectives in terms of the specific business functions the project will support. Refer to an expanded definition of project scope in the supporting material, if necessary.
- **Schedule.** Set deadlines for project deliverables. Define when the project starts and the projected completion date. Document major milestones that should be finished at certain dates.
- **Staffing.** Identify what skill sets are required on the project and who is responsible for specific activities.

- **Total Development Cost.** Include the current total development cost estimate for the project from the initial project plan or as revised in the project implementation plan. Include a summary of staffing requirements and costs.
- **Total Net Cash Flow.** Provide the cash flow of the project for the entire life cycle.
- **Funding Source.** Document the source of funds and indicate any contingencies.
- **Summary of Benefits.** Include a brief list of tangible and intangible benefits for the project. Refer to an expanded presentation of project benefits in the supporting material, if necessary.
- **Risks.** Identify major risks associated with the project and what action is anticipated to mitigate them.
- **Responsibilities.** Document the responsibilities and authority of the major participants, including the sponsor(s), project manager, and other persons who control different variables that affect the success of the project.
- **Signature Blocks for Approval.** Signatories are the agency head or appropriate manager within the sponsoring entity, project manager, and other stakeholders, if multiple units of government are involved.

Project Implementation Plan

Each project manager should develop, maintain, and follow a written plan that defines project goals, processes, and resource estimates (in terms of schedule, cost, and development). The implementation plan must be updated throughout the life of the project to accurately reflect the current plan. The implementation plan should review and update the original information technology project proposal that served as a decision document for funding. The implementation plan serves as supporting documentation for the project charter.

The project implementation plan should summarize the results of any detailed development planning, including the requirements definition, the general design, and feasibility study.

The project implementation plan should include a well-defined problem statement with well-defined business and technical requirements that assure the information technology solution satisfies the business need. Requirements must be thoroughly

documented and understood by the project team. Changes to requirements must be managed throughout the life of the project.

Risks associated with each information technology project should be identified, analyzed, and prioritized. Identified risks should be controlled through the processes of project planning and monitoring. Risk identification and management must be integrated components of project management and risks must be continuously assessed and analyzed during the life of the project.

Project Tracking and Reporting

Project managers should continuously track the progress of all projects against the project implementation plan. Project tracking involves monitoring and reviewing the project accomplishments and results against documented estimates contained in the implementation plan, and adjusting these estimates based on the actual accomplishments and results. Project tracking and reporting should serve the needs of:

- Project management
- Project sponsors
- Agency directors
- Policy makers

Close attention to basic control principles will improve the success of projects. Achieving this requires a disciplined approach to tracking project status, anticipating potential problems that may arise, and quick attention to resolve any problems. Project tracking and reporting should include the following minimum components, with a comparison between estimated and actual status for that time period.

- Changes to project sponsorship, management, or organization
- Project schedule and milestones (including changes to scheduled dates for key deliverables or milestones and planned completion date)
- Project budget (including cash flow and funding sources)
- Project scope, objectives, or requirements (if any changes occur)
- Summary of accomplishments since the last reporting period
- Summary of past, current and future issues (including steps to mitigate actual or potential problems and an updated risk analysis)

Planning and Project Management

Project tracking methods and requirements will vary by project, based on the size, cost, complexity, and impact on the affected organizations. The management of a project includes processes for tracking and communicating project status and performing risk assessments. The formality of this tracking process may change, based on the specific project. The project manager has responsibility for tailoring all elements to meet the specific needs of the project. These same factors will affect the frequency of reporting, whether monthly, quarterly or less frequently. All projects should have a final report that summarizes final costs, issues, and lessons learned.

Summary of Planning Components and Applicability

| Information Technology Planning Components | Description | Purpose | Primary Users | Timeline | Applicability | | | |
|--|---|---|--|------------|--|-------------------------------|----------------|--|
| | | | | | State Agencies | NITC Grants | Other Entities | |
| Comprehensive IT Plan | | | | | | | | |
| Comprehensive IT Plan | Agency level overview and strategic direction for the future | 1) Guide internal agency planning process 2) Provide context for reviewing projects 3) Identify opportunities for collaboration 4) Identify enterprise-wide issues | 1) Agencies 2) CIO 3) Tech. Panel | 4/1/2002 | Required | NA | Recommended | |
| Biennial Budget Process | | | | | | | | |
| Budget Request | Biennial budget request for information technology expenditures | 1) Assist agency management of major resource 2) Document expenditures on information technology 3) Identify enterprise-wide issues | 1) Agencies 2) Budget Off. 3) NITC/CIO 4) Policy makers | 9/16/2002 | Required | NA | NA | |
| Project Proposals | Detailed explanation of objectives, scope and justification of specific projects for which new or additional funding is requested | 1) Guide internal agency planning process 2) Document scope and benefits of project for policy makers 3) Provide basis for review and prioritization by NITC | 1) Agencies 2) NITC 3) CIO 4) Policy makers | 9/16/2002 | Required for new and additional funding only | Required | Recommended | |
| Technical Review | Review projects for technical soundness and consistency with Statewide Technology Plan | 1) Evaluate technical soundness of projects 2) Determine whether projects are consistent with state plan | 1) Agencies 2) NITC 3) CIO 4) Policy makers | 10/15/2002 | Required for new and additional funding only | Required | Optional * | |
| Project Prioritization | Evaluation and prioritization of project proposals by the NITC and its Councils | 1) Prioritize projects 2) NITC forwards prioritized list of projects to Governor and Legislature | 1) NITC 2) CIO 3) Policy Makers | 11/15/2002 | Required for new and additional funding only | Required - NITC Awards Grants | NA | |
| Project Management and Implementation | | | | | | | | |
| Project Management and Implementation | Guidelines for project management, implementation, status reporting and monitoring. | 1) Guide agency management of projects 2) Promote successful implementation 3) Document project status | 1) Agencies 2) CIO 3) Policy makers | On-going | Recommended for all IT projects, including those which did not require new or additional funding | Recommended | Recommended | |

Technical reviews are optional for all other entities, except for projects receiving funds from the Education Innovation Fund and School Technology Fund. State Statute requires these projects to be reviewed by the Technical Panel of the NITC.

Planning and Project Management

Section 5

Effectiveness Measures

Section 5**Effectiveness Measures****Overview**

The overall purpose of the NITC is to set strategic direction in the area of information technology. This requires knowledge of where we are as well as where we want to be. Section 1 (Goals) sets forth a vision with supporting objectives and priorities. This section presents various ways to track the state's strength in its deployment and use of information technology. The scorecard includes various measures for communities, education, and government.

The NITC must also track its own effectiveness. This is accomplished in part through the choice of NITC objectives, Council priorities, and action plans that have measurable outcomes. To track progress, the Office of the CIO will prepare status reports on NITC-sponsored activities. These reports will be available on the NITC web site at: www.nitc.state.ne.us.

Below is a summary of NITC initiatives and accomplishments:

1. TINA / NETCOM. The NITC served as a catalyst by providing encouragement, funding, and facilitation at critical junctures of the TINA Study. The Technical Panel had an important role in developing and reviewing the RFP for aggregating services under a prime contractor. The Division of Communications has stated that it will not sign a contract with a prime contractor without NITC endorsement.
2. Nebraska Network Feasibility Study. In February 2002, the NITC established an ad hoc group to make recommendations regarding ways of providing digital networks and related support functions to serve education, communities, and state government. The feasibility study is intended to answer questions regarding the feasibility of greater coordination and collaboration in providing applications that use statewide networks serving public functions.
3. Budget Reviews and Prioritization. The review and prioritization process in 2000 was thorough, structured, and produced an integrated and numeric ranking of budget requests for information technology. Both the Budget Division and Legislative Fiscal Office used the NITC reviews and priorities as a point of departure for their own analyses. Efforts are underway to improve the process for 2002.
4. Information Technology Planning. The Statewide Technology Plan focused attention on the need to improve planning for information technology. This is reflected in agency technology comprehensive plans, project proposal forms, and

budget forms for information technology. The NITC can point to the following accomplishments stemming from this initiative:

- Agency comprehensive information technology plans for almost all agencies, which are available on the NITC web site;
- A summary of agency plans, also available on the NITC web site;
- Completion of the first Statewide GIS Strategic Plan in 2001;
- Update of the CJIS Strategic Plan in 2001;
- Widespread use of the project proposal form.

Efforts are underway to improve the process for 2002.

5. **Project Management.** The Statewide Technology Plan endorsed the Project Management Institute's Project Management Body of Knowledge (PMBOK). The first implementation was a requirement for selected projects to submit quarterly project status reports, using a standard format. Seven agencies reported on a total of 16 projects during the last fiscal year, representing 100% compliance. That number will increase to at least 18 projects in FY 2002. Copies of the project status reports are available on a password-protected web site:
<http://www.nitc.state.ne.us/itpm/>.
6. **Technical Architecture.** The Technical Panel has begun the task of developing standards and guidelines for the state's technical architecture. Security policies, accessibility guidelines, and video standards are the furthest along. Other standards are in various stages of development. It is too early to assess what impact these standards and guidelines will have. As a first step in evaluating their effect, the revised instructions for the agency comprehensive information technology plans will request information specific to security, disaster recovery, and accessibility.
7. **Grants.** Since its inception, NITC has awarded a total of \$675,630 in Community Technology Funds and \$639,975 in Government Technology Collaboration Funds. Lists of recipients are available on the NITC web sites:
<http://www.nitc.state.ne.us/cc/grants/2001/ctf2001.htm>,
<http://www.nitc.state.ne.us/sgc/grants/>.

Some of the Government Technology Collaboration Fund projects include:

- CCPE project to upgrade their network and develop a statewide postsecondary educational facilities database;
- Arts Council project to convert to e-granting;
- UNL-Conservation and Survey Division project to digitize historical collection of aerial photographs;
- Aid for small agencies:
 - Foster Care Review Board funding for hardware to allow access to N-Focus and other state systems;

Effectiveness Measures

- Volunteer Service Commission hardware upgrade to allow interaction with federal government application.

Some of the Community Technology Fund projects include:

- City of Aurora technology business incubator;
 - Lower Platte North NRD standardized database of surface water features;
 - Southeast Community College distance learning network for two health occupations associate degree programs to rural Nebraska;
 - Nebraska Commission for the Deaf and Hard of Hearing video conferencing network to provide mental health services for deaf and hard of hearing people in the Panhandle;
 - Omaha Tribe of Nebraska will develop an information technology plan that will recommend strategies to enhance governmental, social, and economic infrastructures.
8. Coordination. The NITC and its councils provide a vehicle for organizing collective action on information technology issues. Examples of significant accomplishments include:
- Developing the state's eGovernment Strategy and Governor's Business Portal Action Plan;
 - Preparing the Community IT Toolkit (in collaboration with the Community Council and Technologies Across Nebraska)
 - Developing the Education Council's policy on course cancellation fees for the NEBSAT system;
 - Facilitating a cooperative purchasing agreement of computers through the Midwest Higher Education Consortium;
 - Investigating the costs and benefits of Internet 2 for K-12 and Higher Education in Nebraska [EC Adequate Rural Bandwidth action item];
 - Coordinating Statewide Distance Learning Report from K-12 (NDE) and Higher Education (CCPE) giving data on programmatic delivery and technical services (NET) [LB543 Intent Language];
 - Researching neighboring states' administration of distance learning and data networks (Iowa, South Dakota, Missouri) [EC Synchronous and Asynchronous Instructional Methods action item];
 - Implementing video standards and developing a migration plan for existing distance learning classrooms [EC Statewide Video Standard action item];
 - Expanding the membership of the Ed Council's Training Advisory Work Group to include Tribal Colleges and K-12 private education and expanding its role to include assessment of the State's I.T. training needs [EC Priority: Identifying and facilitating diverse training opportunities].

Effectiveness Measures

Community Information Technology Effectiveness Measures

Community Indicators

There are few sources, which regularly document the use of information technology by communities or households by state. The U.S. Department of Commerce periodically publishes reports examining Internet access based on data collected by the U.S. Census Bureau. In the last two reports published by the Department of Commerce, Nebraska was slightly below the national average in the percentage of households with Internet access. The most recent report, *A Nation Online: How Americans Are Expanding Their Use of the Internet*, is available at <http://www.ntia.doc.gov/ntiahome/dn/index.html>.

Percent of Households with Internet Access

| | 2000 ¹ | 2001 ² |
|-------------------------|-------------------|-------------------|
| Nebraska | 37.0% | 45.5% |
| National Average | 41.5% | 50.5% |

The 2002 State New Economy Index

<http://www.neweconomyindex.org/states/2002/index.html>

B. Nebraska

| Indicator | Rank | Score |
|--|-----------|-------|
| Overall* | 33 | 54.35 |
| Aggregated Knowledge Jobs | 26 | 9.91 |
| Information Technology Jobs <i>Employment in IT occupations in non-IT industries as a share of total jobs.</i> | 21 | 1.6% |
| Managerial, Professional & Tech Jobs <i>Managers, professionals, and technicians as a share of the total workforce.</i> | 27 | 25.3% |
| Workforce Education <i>A weighted measure of the educational attainment (advanced degrees, bachelor's degrees, associate degrees, or some college course work) of the workforce.</i> | 34 | 46.6 |
| Education Level of the Manufacturing Workforce <i>A weighted measure of the educational attainment of the manufacturing workforce.</i> | 5 | 1.56 |

¹ *Falling Through the Net*. National Telecommunications and Infrastructure Administration. August 2000

² *A Nation Online: How Americans are Expanding Their Use of the Internet*. National Telecommunications and Infrastructure Administration. February 2001

| | | |
|---|-----------|-----------------|
| Aggregated Globalization Score | 40 | 8.71 |
| Export Focus Of Manufacturing <i>Manufacturing export sales per manufacturing worker.</i> | 23 | \$33,079 |
| Foreign Direct Investment <i>The percentage of each state's workforce employed by foreign companies.</i> | 45 | 2.8% |
| Aggregated Economic Dynamism Scores | 41 | 7.80 |
| "Gazelle" Jobs <i>Jobs in gazelle companies (companies with annual sales revenue that has grown 20 percent or more for four straight years) as a share of total employment.</i> | 32 | 12.8% |
| Job Churning <i>The number of new start-ups and business failures, combined, as a share of all establishments in each state.</i> | 45 | 16.9% |
| Initial Public Offerings <i>A weighted measure of the value and number of initial public stock offerings of companies as a share of gross state product.</i> | 28 | 4.31 |
| Aggregated Digital Economy Scores | 18 | 10.98 |
| Online Population <i>The percentage of adults with Internet access in each state.</i> | 28 | 55.4% |
| Commercial Internet Domain Names <i>The number of commercial Internet domain names (".com") per firm.</i> | 42 | 0.41 |
| Technology in Schools <i>A weighted measure of five factors measuring computer and internet use in schools.</i> | 1 | 3.82 |
| Digital Government <i>A measure of the utilization of digital technologies in state governments.</i> | 22 | 3.18 |
| Online Agriculture <i>A measure of the percentage of farmers with Internet access and who use computers for business.</i> | 22 | 3.10 |
| Online Manufacturers <i>The percentage of manufacturing establishments with Internet access.</i> | 31 | 84.6% |
| Broadband Telecommunications <i>A measure of the use and deployment of broadband telecommunications infrastructure over telephone lines.</i> | 12 | 3.62 |
| Aggregated Innovation Capacity | 34 | 7.66 |
| High-Tech Jobs <i>Jobs in electronics manufacturing, software and computer-related services, telecommunications, and biomedical as a share of total employment.</i> | 19 | 4.9% |
| Scientists and Engineers <i>Civilian scientists and engineers as a percentage of the workforce.</i> | 40 | 0.33% |

Effectiveness Measures

| | | |
|---|-----------|-------|
| Patents <i>The number of patents issued to companies or individuals per 1,000 workers.</i> | 41 | 0.34 |
| Industry Investment in R&D <i>Industry investment in research and development as a percentage of Gross State Product (GSP).</i> | 42 | 0.42% |
| Venture Capital <i>Venture capital invested as a percentage of GSP.</i> | 35 | 0.16% |

* Because of differences in [methodology](#), changes in ranks between 1999 and 2002 cannot all be attributed to changes in actual economic conditions in the state.

Education Information Technology Effectiveness Measures

Education Technology Statistics

Although Nebraska's ratio of the number of students per computer has improved in almost every case, other states have made faster headway by providing even more computers using increased funding. With the decreased allotments from the Education Innovation Fund and the Technology Challenge Literacy Fund for new technology, Nebraska's ranking may continue to decline. Nebraska's Internet access has improved relative to the rest of the country by deploying more T-1 to public schools over the past two years.

| Category | Year | National Average | Nebraska Average | Rank |
|---|------|------------------|------------------|------|
| Students Per Instructional Computer | 1999 | 5.7 | 3.9 | 2 |
| | 2001 | 4.9 | 3.7 | 5 |
| | 2002 | 4.2 | 3.1 | 6 |
| Students Per Instructional Multimedia Computer | 1999 | 9.8 | 7.1 | 3 |
| | 2001 | 7.9 | 7.1 | 5 |
| | 2002 | 6.9 | 6.0 | 16 |
| Students Per Internet-connected Computer | 1999 | 13.6 | 7.2 | 3 |
| | 2001 | 7.9 | 5.1 | 5 |
| | 2002 | 6.8 | 4.6 | 3 |
| Of those schools with Internet Access, the % that connect using T-1, cable modem, or faster | 1999 | 56% | 49% | 30 |
| | 2001 | 67% | 77% | 7 |
| | 2002 | 72% | 69% | 29 |

Government Information Technology Effectiveness Measures

Digital State Survey

For three years, the Center for Digital Government, The Progress & Freedom Foundation, and Government Technology Magazine have conducted a detailed survey of digital government in all 50 states. Nebraska's overall score in 1999/2000 was 14. Nebraska scored relatively well in five categories. In 2001, the Digital State Survey made important changes in content and verification procedures. Detailed rankings are provided only for states that rank in the upper half. Nebraska's standing was 17th overall, with a top-ten ranking in three categories. The 2002 Digital State Survey is underway. A comparison of Nebraska's ranking in 2000 and 2001 is below:

| Digital State Survey Results | | |
|---|-----------------------------|-------------------|
| Category | 2000 Ranking | 2001 Ranking |
| Electronic Commerce / Business Regulation | 28 | 25 |
| Taxation / Revenue | 29 | 9 (tie) |
| Law Enforcement / Courts | 12 | Unranked (> 25th) |
| Social Services | 9 | 5 (tie) |
| Digital Democracy | 13 | 3 |
| Management / Admin. | 10 | 22 |
| Education | K-12: 31st; Higher Ed: 17th | 20 |
| GIS / Transportation | (New category in 2001) | Unranked (> 25th) |
| Aggregate Ranking | 14th | 17th |

The rankings in specific categories reflect the type of questions asked. For example, in 2000, Nebraska ranked 10th in Management/Administration, because it boasted a CIO, a technology commission, and had completed a statewide technology plan. In 2001, the questions focused on whether the CIO had broad authority, whether the technology commission made decisions on projects, and whether a detailed technical architecture was in place. Nebraska's ranking dropped to 22nd, because we are pursuing a collaborative approach to coordination rather than top-down centralization of all decision-making authority. And, we are still in the early phases of the complex task of defining a technical architecture.

In addition to the survey results above, Nebrask@ Online was a 2001 finalist (top 10 designation among states) in the "Best of the Web" competition. The 2001 Digital State Survey also recognized the Department of Health and Human Services' NFOCUS program as a best practice. NFOCUS is unique among states, because it integrates multiple aid programs and provides access to a wide range of private entities that are involved in client intake and services. It is a fully automated eligibility determination and case management system that integrates twenty-five separate benefits programs.

Copies of the Digital State Survey reports are available at: <http://www.centerdigitalgov.com/>. The “best of breed” reports are available on the NITC web site at: www.nitc.state.ne.us/news/0201. A copy of this report with a detailed analysis by category is available at: http://www.nitc.state.ne.us/news/0201/SG_nebraska_scorecard.pdf.

Its score in five categories kept Nebraska from ranking in the top 10 for 2001. These include electronic commerce / business regulation, law enforcement / courts, education, and GIS / transportation. Key steps to improve in these categories are summarized below. Part C gives more detailed information about the results, criteria, and best practices for all eight categories.

Electronic Commerce / Business Regulation. Moving business-related forms to the Internet for downloading or submitting online is key to success. Other areas for improvement include online vehicle registration renewals and security and ease of electronic payment options. Progress also depends on successfully engaging citizens and businesses in developing online services and information.

Current Strategy: Governor’s Business Portal Initiative; individual agency enhancements.

Law Enforcement / Courts. Key success criteria include digital mobile technologies and a digital communications network for officers. Using digital signatures for the justice system and accepting pleadings, motions, and brief filings online are also areas for improvement. Nebraska must continue its progress in integrating criminal justice and law enforcement information systems.

Current Strategy: JUSTICE (court automation system) enhancements; Criminal Justice Information System (CJIS) Strategic Plan; individual agency enhancements.

Management / Administration. A major reason for our low ranking in this category is the lack of a technical architecture. Another is the lack of authority to implement an enterprise view of information technology. Another benchmark (Governing Magazine’s Government Performance Project 2001) also downgraded Nebraska’s approach to information technology management for these reasons. That survey indicated the need to accelerate development of the technical architecture, improve evaluation of proposed systems, and establish evaluation of existing systems after implementation.

Current Strategy: Nebraska Information Technology Commission (NITC) planning and project management requirements; project review process; technical architecture standards and guidelines.

Education. Doing better in this component would require a more centralized approach to several issues and services, including steps to insure the quality and effectiveness of distance education programs and using technology to track the academic performance of children in public schools. In addition, Nebraska

Effectiveness Measures

educational institutions would need to deploy “e-learning systems” that allow individual students to conduct coursework over the Internet.

Current Strategy: NITC Education Council priorities; individual agency enhancements.

GIS / Transportation. Criteria for success include using geographic information systems (GIS) to improve the accuracy and timeliness of decisions, integrating Intelligent Transportation System data, and providing road construction and traffic information and updates on the State web site. In addition, the State must maintain a clearinghouse for GIS data, with public access. Finally, the survey asked whether states have implemented federal plans to bring the Intelligent Highway System to the state’s motor carrier industry.

Current Strategy: GIS Steering Committee Strategic Plan; Department of Roads (DOR) GIS Strategic Plan; DOR Intelligent Transportation System.

Governing Magazine Performance Evaluation

Every two years, Governing Magazine sponsors the Government Performance Project covering five areas of management including financial management, capital management, human resources, managing for results, and information technology. Nebraska scored an average grade of B in 1999 and B- in 2001. Nebraska’s grade for information technology management was a C+ in both 1999 and 2001, but dropped significantly relative to other states. In 1999, Governing Magazine ranked 27 states with a grade of C or below. In 2001, only 12 states received a grade of C or below. Nebraska did well in the areas of having a statewide technology plan, sharing data among agencies and across jurisdictions, implementing digital government, and using information technology to support agency functions and programs. Areas for improvement included:

- More centralized authority over information technology decisions (the Governing survey implies a preference for centralized decisions);
- Formal evaluation of proposed hardware and software systems;
- Formal evaluation of information technology systems after implementation;
- A structured process for project management, tracking, and reporting;
- Adopting a comprehensive technical architecture, standards, and guidelines;
- Implementing training.

Security Assessments

In October 2000, KPMG conducted a limited security audit of the state’s network. They identified several vulnerabilities stemming from missing or weak security policies and poorly configured servers. Long-term recommendations called for:

- Developing and enforcing security policies and procedures;
- Creating minimum baseline documents for each platform;

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- Reviewing and testing device configurations on a regular basis.

The NITC has funded a grant for an external intrusion vulnerability assessment of the state's data network. The Office of the Chief Information Officer will solicit bids in June or July 2002. The assessment will include a vulnerability scan that is designed to mimic how an external party with little or no "inside" information would approach breaching State security measures. Based on the results of the initial phase, selected areas of potential vulnerabilities will be studied in further depth and exploited as far as is reasonable without causing significant disruption of services.

CHARTS Independent Verification and Validation

As part of a federal requirement, the consulting firm of TRW has performed semi-annual reviews of the CHARTS project. Their findings included recommendations for statewide standards in several areas:

- Management standards for large scale and high risk projects;
- Quality Assurance (QA) standards, metrics and tools;
- System development and Configuration Management (CM) process for all state projects.